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ENTRANCE TO CAMPUS, UNIVERSITY OF COLORADO.

[Whole Number 29.]

UNITED STATES BUREAU OF EDUCATION.  
CIRCULAR OF INFORMATION NO. 1, 1903.

CONTRIBUTIONS TO AMERICAN EDUCATIONAL HISTORY.

EDITED BY HERBERT B. ADAMS.

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No. 34.

HISTORY OF HIGHER EDUCATION

IN

COLORADO.

BY

JAMES EDWARD LE ROSSIGNOL, A.M., Ph.D.,  
*Professor of History and Economics in the University of Denver.*



WASHINGTON:  
GOVERNMENT PRINTING OFFICE,  
1903.



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## LETTER OF TRANSMITTAL.

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DEPARTMENT OF THE INTERIOR,  
BUREAU OF EDUCATION,  
*Washington, D. C., January 23, 1903.*

SIR: I have the honor to transmit herewith the History of Higher Education in Colorado, prepared by James Edward Le Rossignol, A. M., Ph. D., professor of history and economics in the University of Denver. The document constitutes Circular of Information No. 1, 1903, and is the thirty-fourth of the series which was prepared under the direction of the late Prof. Herbert B. Adams, of the Johns Hopkins University, and edited by him up to the time of his death.

This history, like others of this series which deal with higher education in the newer States, shows the zeal of the first settlers of these States in establishing all the links of a complete system of education.

Very respectfully, your obedient servant,

W. T. HARRIS,  
*Commissioner.*

Hon. E. A. HITCHCOCK,  
*Secretary of the Interior.*





## CHAPTER I.

### COLORADO COLLEGE.

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Before the year 1874 many proposals had been made looking to the founding of one or more colleges in the Territory of Colorado. The University of Colorado was incorporated in 1861. The Colorado Seminary was founded in 1864, and continued to exist for several years. An Episcopalian school for boys—afterwards known as Jarvis Hall—was established at Golden in the early seventies.

The same desire for educational improvement was shown on July 12, 1871, when the Colorado Springs Company adopted the report of a committee concerning the laying out of a town site for the Fountain Colony. This committee, consisting of Gen. R. A. Cameron, William H. Greenwood, and E. S. Nettleton, recommended that a tract of land one-third of a mile wide and a mile and a half long in the valley of Monument Creek be set aside for educational and other public purposes. Included in this tract was the present college reservation, "which was distinctly set aside by this committee for the founding of a college." This action of the committee was largely owing to the advice and suggestions of Gen. William J. Palmer and Gen. R. A. Cameron.

One of the first proposals to establish a college in Colorado under the auspices of the Congregational Church seems to have been made by Rev. T. N. Haskell, A. M., before the Congregational Conference at Boulder on October 28, 1873. Mr. Haskell was appointed moderator of the conference and chairman of a permanent committee on education "to ascertain what opportunities there are for founding a higher institution of learning in Colorado under Congregational auspices."

The committee immediately took steps to secure offers of land and money from towns desiring to be the seat of a college. Several towns made proposals, including Greeley and Colorado Springs. The Colorado Springs Company offered to give to the college 70 acres of the reservation above mentioned, together with a block of 20 acres on higher ground and a cash donation of \$10,000, on condition that the trustees should raise \$40,000 more.

At a meeting of the General Congregational Conference held at Denver on January 20, 1874, Mr. Haskell, as chairman of the com-

mittee, made a report in favor of establishing the college at Colorado Springs. He also made an address on the benefits of higher education in general and of Christian education in particular.

State universities are specially liable to suffer deterioration from the high standard of Christian faith and morals. We can not commit all college culture in the country, or even in Colorado, to such secularizing and semipolitical care. A Congregational college for Colorado, forever Christian, without ecclesiastical control, comes nearer to that unsectarian ideal which I most admire and wish to see fulfilled.

In this address mention was also made of the science of chemistry and irrigation as important for the development of the mining and agricultural resources of the Rocky Mountain region, and of the importance of the study of the Spanish language in the education of teachers and missionaries for work among the Mexican population of the United States.

After this address and a full discussion, conference decided without dissenting vote to undertake at once the establishment of a Christian college in Colorado under Congregational auspices, having a board of trustees of not less than 12 nor more than 18 men, two-thirds of whom must be members of evangelical churches. Colorado Springs was also selected as the most suitable site and the offers made from that town through the educational committee were accepted.

The conference subsequently elected the following self-perpetuating board of trustees, 18 in all: Rev. E. P. Wells, Rev. J. M. Sturtevant, jr.; Rev. T. N. Haskell, Rev. E. B. Tuthill, Rev. Nathan Thompson, Rev. T. C. Jerome, Rev. R. C. Bristol, Maj. Henry McAllister, Gen. W. J. Palmer, Gen. R. A. Cameron, Dr. W. A. Bell, H. W. Austin, esq.; W. S. Jackson, esq.; E. S. Nettleton, esq.; Prof. J. E. Ayers, J. R. Hanna, esq.; W. McClintock, esq., and H. B. Heywood, esq.

The trustees immediately proceeded to arrange for the opening of the college. Mr. Haskell was appointed financial agent and endeavored to secure subscriptions in Colorado and in the East for the beginning of college work, but with no great success. There was much business depression in Eastern cities. Also, the College Aid Society would not permit the presentation of the cause before the New England churches until the college should have a freshman class and be regularly received under the wing of the society.

In spite of difficulties, the trustees secured the services of Rev. Jonathan Edwards, a graduate of Yale and pastor of the Congregational Church at Dedham, Mass. Mr. Edwards was to be professor of literature and was to receive as compensation the fees of students attending the college. A preparatory department was opened at Colorado Springs on May 6, 1874, in rooms secured near the center of the town. The first term continued for ten weeks. There were about 18 students in attendance. At the end of the term "a committee of educated men passed 13 of these students to the literary and scientific freshman rank."



PALMER HALL, COLORADO COLLEGE.





On July 1, 1874, the Colorado Springs Company made the following report:

Since our last report the Congregationalists have located a college at Colorado Springs and preparations are now being made to erect a large, substantial building for its purposes. This institution will be of a high character, equal to the best Western colleges. The location will undoubtedly insure it a large patronage, as here pupils of both sexes will have the best facilities for acquiring an education while at the same time reaping the benefit of a climate of unsurpassed salubrity and enjoying scenery of unequaled beauty and grandeur. Until the permanent college buildings are erected instruction will be given in suitable buildings already secured near the central part of the town. A preparatory department is now open and a freshman class has been formed for the autumn term. Other classes will be formed if competent students apply. Rev. Jonathan Edwards, of Yale college, is principal. The location of this institution at Colorado Springs is the first step toward the accomplishment of an object that the directors of the company have ever kept in view—that of making the town of Colorado Springs prominent as an educational center and a home of refined and cultivated society.

In September the college began the work of the fall term in a new frame building on the corner of Tejon street and Pike's Peak avenue, where the First National Bank now stands. Afterwards the college was moved to the Cumberland Presbyterian Church. It continued to occupy rented buildings until the completion of the central portion of the first college building, in the year 1880. During the year 1874-75 there were in all 76 students, of whom 17 were of freshman rank. Before the end of the year Professor Edwards resigned. He was succeeded by Rev. James G. Dougherty as president of the college, who continued in office during the ensuing year.

The first catalogue of the college was published in 1875. The members of the faculty were as follows: Rev. J. Edwards (resigned), Rev. James G. Dougherty, president; Solon T. French, professor of Latin and Greek; R. Spencer Dills, instructor in Spanish; S. C. Robinson (resigned), instructor in natural science; E. N. Bartlett (resigned), instructor in mathematics; Prof. J. W. Jameson (resigned), instructor in music; Minnie S. Mackenzie, instructor in English; Georgia B. Gaylord, instructor in music. There was therefore a faculty of 5 members, including the president.

In the collegiate and preparatory departments there were classical and scientific courses. The requirements for admission to the freshman class included the completion of the work of the three years' preparatory course or its equivalent. The studies of the preparatory classical course were as follows: Latin—grammar, reader, composition, Cæsar, Virgil's Georgics and Æneid, Cicero's Orations. Greek—grammar, composition, Anabasis, Iliad, Greek and Roman history; algebra and geometry.

The classical college course was outlined as follows:

*Freshman class.*—Latin—Livy, Cicero's De Senectute. Greek—Diodorus, Iliad; Greek and Roman history; algebra and geometry.

*Sophomore class.*—Horace, Tacitus, Demosthenes, Plato's Crito, French or Spanish, rhetoric, trigonometry, mechanics, essays.

*Junior class.*—Astronomy, English literature, political economy, logic, chemistry, English history, German literature, original speeches, essays.

*Senior class.*—Mental science, modern history, German or Spanish, moral science, evidences of Christianity, essays.

Some of these courses were elective, and no student was permitted to pursue more than three full courses at the same time. The courses were open to men and women on the same terms. The college tuition fee was to be \$39 a year and the preparatory fee \$29, with music extra.

The policy of the college is thus described:

The college is under no ecclesiastical or political control. The faculty are selected with no other limitations than that they shall be Christian men with special fitness to teach the studies of their departments. The Congregationalists undertake to build the college, not as a Congregational college but as a Colorado college. At no time will the special doctrines or polity of any religious denomination be taught. At suitable times the absolute truth of the biblical revelation and the supreme authority of Jesus Christ will be illustrated or enforced by argument.

During the first two years of its existence the college struggled under financial embarrassment. The sums of money collected by Professor Haskell, Professor Dougherty, and other friends of the college amounted to only \$2,616.45. This, together with the receipts from fees, was inadequate to the support of the college. It does not appear that the \$10,000 promised conditionally by the Colorado Springs Company was ever paid. During the year 1875-76 the college became involved in debt and many of the students left. It was feared that the college would have to suspend work, but it continued to exist until the close of the term, in June. When the college was reopened in the autumn of 1876 there was no property except some \$700 in a mortgaged building and lot. There were debts for services rendered and other obligations equal at least to the value of the property. Meanwhile the college had been adopted by the American College and Educational Society, now known as the Congregational Education Society. On the recommendation of this society, and through the influence of the Rev. E. P. Tenney, six gentlemen of Massachusetts agreed to furnish money to reopen the college and to establish a permanent endowment to be known as the "founders' endowment fund." Their names and subscriptions are as follows:

James G. Buttrick.....	\$100
Samuel Crooks.....	2,600
Henry Cutler.....	6,800
A. A. Sweet.....	5,335
B. T. Thompson.....	50
E. Hubert Cutler.....	1,000

Total.....	15,885
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Of this amount \$3,182.10 was paid during the year 1876-77 and used for current expenses, with the understanding that it was to be repaid to the founders' endowment fund at a future date.

In this way it was possible to reopen the college in September, 1876, with Rev. E. P. Tenney, A. M., as president, assisted by Winthrop D. Sheldon, A. M., and F. W. Tuckerman. During the frequent absences of the president the work of administration was ably carried on by Professor Sheldon, assisted by Prof. Frank H. Loud, who has been connected with the college from the year 1877 until the present time. During the first year there were 25 students in attendance, of whom 7 were in the preparatory course, 13 in the normal course, and 5 were special students. There were no college students. In the following year there were 66 students in all, of whom 3 were of college rank. In the year 1878-79 there were 5 college students out of a total attendance of 70.

During the three years from 1876 to 1879 the work of securing money for the running expenses of the college and for endowment was vigorously carried on by President Tenney, and by the officers of the American College and Educational Society. Nearly 150 different contributors, including churches and Sunday schools, gave in all \$23,452.87. In addition, no less than \$51,950 was subscribed in various ways, chiefly in aid of the founders' endowment fund. These amounts were paid or promised largely by friends in the East, but the friends of the college in Colorado Springs and elsewhere in Colorado were not less active and generous. The Colorado Springs Company in 1877 deeded to the college the 90 acres of land it had promised in 1873. This land was valued at \$55,000. Subscriptions to the amount of \$12,329.65 were obtained, mostly in small sums, of which \$10,202.52 was paid before July, 1879, mostly in cash, but also in land, coal, lumber, labor, and agricultural produce. A silver mine was one donation. Another was a dollar's worth of butter. Some of these subscriptions had been secured by Professors Haskell and Dougherty several years before and were paid now that the conditions were fulfilled. The Ladies' Centennial College Aid Society, under its efficient president, Mrs. Douglass Ely, contributed not a little to the success of this work. Before July, 1879, the sum of \$8,444.31 was spent on the college building, which had been begun on July 4, 1877.

On January 25, 1877, a formal agreement was signed between E. P. Tenney, president of Colorado College, J. N. Tarbox, secretary of the American College and Educational Society, and the subscribers to the founders' endowment fund. This agreement in fourteen articles specified the purposes to which the fund might be put, and made certain conditions with regard to religious teaching in the college and the religious and moral character of the members of the faculty. Article 13 provided that in case of failure to comply with the agreement the funds were to revert to the educational society. The founders' endow-



ment fund, or as much of the subscriptions as was paid, must have been used for the building and for current expenses, for it never became a permanent fund, and the college is not now bound by the above contract.

In connection with the work at Colorado College, the College and Educational Society undertook, in the year 1878, the establishment of academies at Santa Fe and Salt Lake City, thus carrying out the early plans for educational and missionary work among Mexicans and Mormons. Colorado College was to be the center of a wide educational movement in the new West. It was hoped that in time these academies would send students to the collegiate department of Colorado College. Similar academies were later established at Albuquerque and Las Vegas. The courses of study at these academies were to correspond to those in the preparatory and normal departments of Colorado College. The academies at Santa Fe and Las Vegas went down as the public-school system was developed, but those at Salt Lake City and Albuquerque are still under the auspices of the Congregational Education Society, as the parent society is now called.

After the year 1879 Colorado College continued to make slow progress for several years. In the year 1880 the central portion of the new college building, for many years known as Palmer Hall, was completed, at a cost of \$43,000, and the work of the college began to be carried on there. This building, later enlarged by the generosity of General Palmer, remained the only college building until the erection of Hagerman Hall in 1889. In the year 1881-82 there were 122 students, of whom 9 were of college rank. In the year 1882 the degree of B. A. was conferred upon Parker S. Halleck and Frederick W. Tuckerman. In addition to these degrees, 9 certificates had been given for proficiency in assaying and 1 for proficiency in analytical chemistry since 1876. The system of admitting graduates of accredited high schools to freshman standing was introduced at this time, and the East Denver High School was the first to be placed on the list. At the same time the library was increased from 2,500 volumes to over 6,000 volumes, largely through donations of books, including a considerable collection from the estate of A. E. V. Strettell. Among the departments of the college at this time may be mentioned the Cutler Training School, "designed to fit pupils for special forms of Christian work in the new West." Because of the great mineral resources of Colorado special attention was also given to chemistry, mining, and assaying, under the direction of Prof. William Strieby, E. M.

Shortly after this time the college ceased to prosper, despite the enthusiastic efforts of President Tenney. The money intended for endowment was used for current expenses. The college became involved more or less in the real-estate speculations of some of its friends, and presently acquired a debt. In the year 1885 President Tenney's administration came to an end, and a successor was not appointed for three



HAGERMAN HALL (BOYS' DORMITORY), COLORADO COLLEGE.





MONTGOMERY HALL (LADIES' DORMITORY), COLORADO COLLEGE.





years thereafter. Instruction was carried on by the faculty during that time, and by the efforts of its friends the college was gradually being relieved of the burden of debt. In the year 1885-86 the faculty numbered 9 in all. There were 55 students, 6 of whom were in college classes. In the year 1888 there were but 28 students, of whom only 3 were of college rank. The 20-acre campus had been sold for debt, though it was afterwards redeemed. The tax debt amounted to about \$3,700. There was no endowment and no money for college purposes. The annual expenses were about \$8,500, and were defrayed largely by money raised in the East by the financial agent, Prof. George N. Marden.

Such was the condition of the college when President William F. Slocum entered upon his duties on October 1, 1888. Yet the situation was not without hopeful features. The people of Colorado Springs were interested in the college; there were generous friends in the East; there was a capable financial agent, and the new president was a man of energy and financial ability. A vigorous policy was at once inaugurated. The tax debt of \$3,700 was paid off, and the president's house was purchased in 1888. From friends east and west pledges were secured to meet the current expenses for a period of three years. Within two years a cash endowment of \$100,000 was obtained from friends in Colorado. In April, 1889, the Woman's Educational Society was formed by the ladies of Colorado Springs, with Mrs. William F. Slocum as president, and its membership was soon over 100. The purpose of this society was to give pecuniary assistance to young women attending the college, and also to raise funds for a girls' hall or residence. The society was most enthusiastic and successful in its work, and in the year 1891 the girls' residence, Montgomery Hall, was completed, free of debt. In 1889 Hagerman Hall was erected at a cost of \$18,000 as a dormitory and clubhouse for young men. In the following year the library was increased to about 7,000 volumes, and the Rice and Curran scholarships were established by gifts of \$700 and \$1,000.

In addition to these improvements in financial matters corresponding improvements were made in the college and preparatory courses. The preparatory school was reorganized and given the name of Cutler Academy, after Henry Cutler, one of the early friends of the college. The preparatory course was lengthened to four years. In the college proper the courses were revised and extended and an effort was made to maintain as high a standard as in Eastern colleges, like Yale and Amherst. A number of elective courses were also introduced. The faculty was in 1890 increased to 13 members, and in addition to the work of the regular staff public lectures were from time to time given by prominent educators.

On January 22, 1890, was founded the Colorado College Scientific Society for "the discussion of recent scientific results, the promotion

among its members of scientific inquiry and investigation, and the publication of the more important papers read at the meetings." Since the formation of this society nine volumes of Colorado College Studies have been published and a tenth is about to be issued.

In the year 1891 a gymnasium was erected, largely through the efforts of the students.

In September, 1892, a telescope of 4-inch aperture was presented to the college by Henry R. Wolcott, of Denver. In the following year was begun the erection of the Wolcott Observatory, which was completed in June, 1894, at a cost of about \$3,000.

In the year 1892 N. P. Coburn, of Newton, Mass., gave \$50,000 for a college library. At first it was intended to use only \$35,000 for a building and to invest the remainder as endowment for the purchase of books. It was afterwards decided to spend the whole amount on the building, which was completed early in 1894 at a total cost of \$53,900. At that time there were in the library about 9,000 volumes and 1,000 pamphlets. The building is of red sandstone, of great architectural beauty, and well adapted to its purpose. The hall in the basement has since been used for the daily chapel services and for public lectures. It is intended ultimately to use it as a stack room.

In the year 1893 Rev. Charles Ray Palmer, D. D., of Bridgeport, Conn., established a library purchasing fund of \$2,500, to be called "The Alfred Barnes Palmer Library Fund."

In March, 1894, university extension work was inaugurated. Courses in geology were given by Professor Surls, and in the duties and privileges of citizenship by Professor Hall, while popular lectures on scientific subjects were delivered by President Slocum and by Professors Cajori, Cragin, and Strieby. Since that time a good deal of this work has been done in Colorado Springs and elsewhere, and at present the scope of the work is being considerably enlarged.

In 1894 the conservatory of music was established, and the department of fine arts. From 1893 to 1897 Colorado College was chiefly interested in raising the endowment known as the Pearsons' fund. It originated in an offer made by Dr. D. K. Pearsons, of Chicago, in the autumn of 1892, and first announced in Colorado Springs in January, 1893. Dr. Pearsons offered to give \$50,000 to the college provided that an additional sum of \$150,000 should be raised within two years. It was originally intended to use one-half of the total sum in building a science hall, but it was afterwards decided to use the entire amount for endowment.

Before June, 1893, some \$30,000 was subscribed, but just then occurred the panic of that year, which prevented much progress toward raising the proposed endowment. During the three years following the panic the college was not a little embarrassed for lack of funds. The total expenditure was about \$26,000. The income from



TICKNOR HALL (LADIES' DORMITORY), COLORADO COLLEGE.





endowment was about \$10,000, and the income from fees \$6,000. There was, therefore, an annual deficit of \$10,000. This deficit was met by special pledges made in 1891 for a period of five years, and by other subscriptions. These pledges were to expire in the year 1896. In the spring of 1896 it became evident that a special effort must be made to raise the endowment fund in order to place the college on a secure foundation.

Meanwhile, the time limit had been extended, first, to July, 1895, then to July, 1896, and, finally, to January 1, 1897. On March 17, 1896, a vigorous campaign was inaugurated by the president and the trustees, with the enthusiastic cooperation of faculty and students. The trustees pledged \$17,000, the faculty \$10,000, and the students \$10,000, while Professor Marden solicited subscriptions in the East and President Slocum in the West.

The \$150,000 was finally raised, fully one-half in the East, and on January 26, 1897, the endowment was completed by the receipt of \$50,000 from Dr. Pearsons.

It is hardly possible to overestimate the importance of this endowment in laying the foundation for the future success of Colorado College. The college was no longer under great financial embarrassment, and since that time friends have multiplied and gifts increased.

In 1897 Tillotson Academy, founded at Trinidad in 1880 by the New West Education Commission, was united to Cutler Academy and moved to Colorado Springs. The property at Trinidad, valued at about \$10,000, became the property of Colorado College.

In December, 1897, Ticknor Hall, the gift of a friend of the college, was completed at a cost of over \$23,000. It is a fine stone building and is the residence for young women of the college classes.

In the same year the museum was enriched by the gift by Gen. W. J. Palmer and the Colorado Springs Company of Professor Cragin's paleontological collection. Other gifts were made to the museum and to the library from time to time.

In March, 1898, some \$3,000 was raised by means of a joint stock company for the improvement of the athletic field. Since then most of the stock has been bought in through the receipts from admission fees. In the same year the electric lighting and heating plant was completed.

In 1899 was erected another large building, the gift of the late Willard B. Perkins. It is known as the "Perkins Memorial," and cost \$30,000. The first floor is the auditorium, with seating capacity of over 600, used for the religious services and other public meetings. This room is to contain a valuable pipe organ, the gift of Miss Elizabeth Cheney, of Wellesley, Mass. The second story is occupied by the department of fine arts and the conservatory of music.

In addition to the gifts already mentioned over \$20,000 has been given in the past ten years for the endowment of scholarships in aid of students. Several other scholarships are supported by annual subscription.

Colorado College has not claimed to be a university, but has directed its whole energy toward the establishment of a strong college. It is stated, however, that new departments will be added in the near future. Colorado Springs is largely a college town and is closely connected with the college in interests and sympathy.

While not without needs that are keenly felt, the college has won an assured position and offers to its students educational facilities of the same grade as are found at Eastern institutions of higher learning.

*Students, by years, since 1874.*

Year.	Students.	Year.	Students.
1874 .....	18	1889-90 .....	144
1874-75 .....	76	1890-91 .....	146
1876-77 .....	25	1891-92 .....	149
1877-78 .....	66	1892-93 .....	187
1878-79 .....	90	1893-94 .....	215
1881-82 .....	122	1894-95 .....	226
1884-85 .....	53	1895-96 .....	256
1885-86 .....	55	1896-97 .....	270
1887-88 .....	22	1897-98 .....	305
1888-89 .....	62	1898-99 .....	409

REQUIREMENTS FOR ADMISSION.

According to the Bulletin for 1899, candidates for admission to the classical course will be examined in the following subjects:

1. Greek: Grammar, prose composition, translation at sight, Anabasis (four books), Iliad (three books), outlines of Greek history.
2. Latin: Grammar, prose composition, translation at sight, Cæsar (four books), Cicero (seven orations), Virgil (six books), outlines of Roman history.
3. English.
4. German or French.
5. Mathematics: Algebra, plane and solid geometry.

Matriculation examinations are held in but few cases. Nearly all the candidates are admitted on presenting certificates from high schools in evidence of having completed a preparatory course equivalent to the above requirements. The system of accredited schools was introduced in 1882. At present there are 42 Colorado schools whose certificates are accepted in lieu of examinations.

REQUIREMENTS FOR GRADUATION.

Since the early years of the college the faculty has endeavored, as far as possible, to maintain standards equal to those of Eastern colleges, such as Yale and Amherst. At present, with a faculty of 28 professors and instructors in the college proper, the work done com-



COBURN LIBRARY, COLORADO COLLEGE.







NEW SCIENCE BUILDING, COLORADO COLLEGE.



pares favorably with that of Eastern colleges, although the number of electives is necessarily limited.

Three courses of four years each are offered, leading to the degrees of B. A., Ph. B., and B. S.

The work of the first two years is largely "required." In the junior year much of the work is elective, while in the senior year it is nearly all elective.

A considerable degree of specialization is possible to a student in his later years. The following courses are offered by the professor of political and social science, and may be considered typical of the work done in the other departments:

1. English history.
2. United States history.
3. History of the Middle Ages.
4. History of the Renaissance.
5. The ancient régime and the revolution.
6. The Napoleonic era and modern times.
7. Elements of political economy.
8. Public finance.
9. Money and banking.
10. Railroads.
11. Socialism.
12. Historical politics.
13. Comparative politics and constitutional law.
14. International law.

#### RELIGION.

The college was founded under the auspices of the Congregational Church, and although the board of trustees is a self-perpetuating body, a majority of its members must still be members of the Congregational churches. The management of the college is by no means sectarian, but it is distinctively Christian.

Religious services are held six days in the week, and all students are expected to be present. Ethical talks are frequently given by the president. The Christian associations are in a flourishing condition.

#### THE LIBRARY.

In the year 1883 there were already about 6,000 volumes in the library, and in 1889 the number was about the same. In 1894, when the Coburn Library was finished, there were 9,000 books and 1,000 pamphlets. Since that time the library has grown rapidly, and there are now 30,000 books and several thousand pamphlets.

In 1896 the library was opened as a circulating library to residents of Colorado Springs and vicinity, and thus became the chief public library of the town.

The "Coburn Library Book Club" was organized in November, 1897, for the purpose of supplying the library with the best new



books. There are now over 100 members, each of whom pays a fee of \$5 a year. After a year the books thus purchased become the property of the library.

A large number of magazines are on file in the reading room.

The library and reading room fee is \$3 for both students and other residents of Colorado Springs.

#### DEPARTMENT OF ART AND DESIGN.

This department was also inaugurated in 1894. At present there are 4 instructors, including the director, Professor Souter.

#### FINANCES.

The college is supported by the interest from its productive endowment, by fees from the students, and by donations. The expenses for the year ending June 15, 1899, were about \$40,400; the income from endowment \$21,700, and the income from fees \$10,900. The annual deficit of \$7,800 is made up by donations from the friends of the college. There is therefore need of additional endowment to meet present needs as well as to provide for the future.

The productive endowment amounts to about \$395,204, invested chiefly in mortgages on real estate in Colorado Springs.

Of the 90 acres originally given to the college by the Colorado Springs Company, 57 acres now remain, and may be safely valued at \$325,000. Not long ago the college was offered \$200,000 for the block of 20 acres east of Cascade avenue.

#### *Inventory of college property.*

Land .....	\$325,000	Palmer Hall (with endowment) .....	\$250,000
Cutler Hall (cost) .....	43,000	Lighting and heating plant.....	20,000
President's house.....	12,000	Perkins Memorial Hall .....	28,000
Hagerman Hall .....	19,000	Organ .....	6,500
Montgomery Hall .....	17,000	Books .....	50,000
Gymnasium .....	3,700	Apparatus, specimens, etc.....	19,000
Observatory .....	5,000		
Library .....	50,000	Total .....	871,200
Ticknor Hall .....	23,000		

If we add to this the amount of the productive endowment, we find that the total college property amounts to \$1,286,400. Of this amount about \$900,000 has been raised for the college during the incumbency of President Slocum.

#### SOURCES OF INFORMATION.

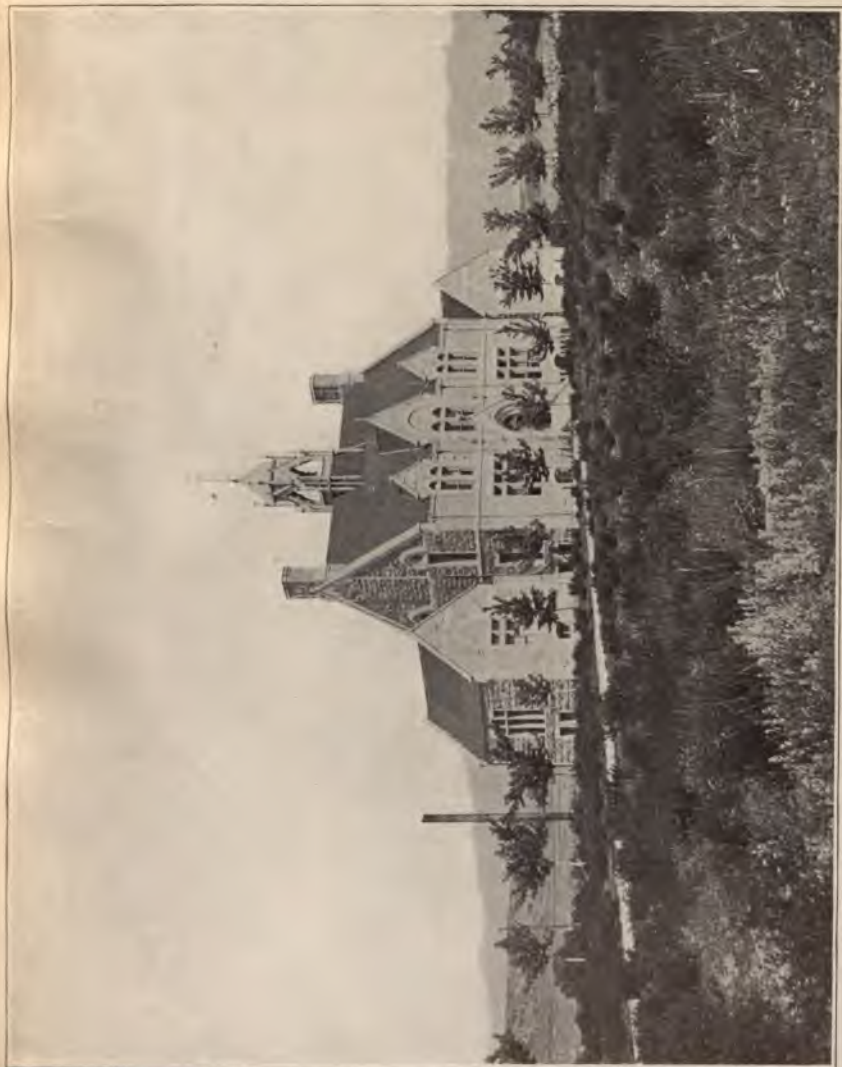
A collection of college bulletins and other pamphlets and papers in the college library.

Personal statements of President Slocum, Dr. Haskell, Professor Loud, and others.



COBURN LIBRARY AND PERKINS ART BUILDING, COLORADO COLLEGE.





PALMER HALL, COLORADO COLLEGE.





## Chapter II.

### THE UNIVERSITY OF COLORADO.

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Before the year 1861 Colorado was part of the Territory of Kansas. On February 26 of that year Kansas was admitted to the Union and on February 28 Colorado was organized as a Territory with the same boundaries as at present.

On November 7, 1861, the university was incorporated by an act of the Territorial legislature and its location was fixed at Boulder. The act was introduced by Charles F. Holly, member for Boulder County. Among the 15 trustees were Governor William Gilpin, J. B. Chaffee, Amos Steck, and A. A. Bradford. The act remained inoperative until the session of 1870, when an amendment to the original bill was passed adding 5 new trustees, all residents of Boulder County. A meeting of trustees was held at Boulder on January 29, 1870. There were present Governor Gilpin, Edward Scudder, B. M. Sanford, J. M. Smith, Granville Berkley, and Amos Widner. They authorized the location of the grounds when there should be an appropriation of money by the legislature. In the following year the present site was procured, about 52 acres, then valued at \$1,026, being given by three citizens of Boulder—M. G. Smith, G. A. Andrews, and Anthony Arnett.

In the year 1872 efforts were made to get an appropriation for buildings, but the bill failed to pass. In the year 1874 the legislature appropriated \$15,000 for the university on condition that a like amount should be secured in cash subscriptions. Thereupon a meeting of trustees was held and a committee appointed to solicit subscriptions. On May 18, 1875, the committee reported that the necessary amount had been secured, and \$30,000 was placed to the credit of the university. On September 20, 1875, the corner stone of the university building was laid.

On March 3, 1875, the enabling act was approved providing for the admission of Colorado to the Union and setting apart 72 sections of the public land for the support of a State university. In the year 1876 the constitution of Colorado provided that upon its adoption the university at Boulder should become an institution of the State, thus entitling it to the lands appropriated by Congress, and further made provision for the management and control of the university.

In the same year the legislature appropriated \$15,000 as an additional building fund. The building was completed in October of that year, at a total cost of about \$45,000, part of which was spent in furniture and improvements. There was therefore now a building, but no money for carrying on the work of the university.

The law which established the university and provided for its maintenance was passed by the first general assembly of Colorado on March 15, 1877. It made provision for the permanent support of the university by the levy of a tax of one-fifth of a mill upon the property of the State, and also for a fund to be secured by the sale of the lands granted by Congress.

The object of the university is thus defined by the act:

To provide the best and most efficient means of imparting to young men and women, on equal terms, a liberal education and thorough knowledge of the different branches of literature, the arts and sciences, with their varied applications.

Section 12 of the act reads as follows:

The university shall include a classical, philosophical, normal, scientific, law, and other departments, with such courses of instructive and elective studies as the board of regents may determine, and a department of the physical sciences. The board shall have authority to confer degrees and grant such diplomas as are usually conferred and granted by other universities. And the board of regents is hereby authorized and required to establish a preparatory department, which shall be under the control of said board of regents, as are the other departments of the university. Nothing in this section shall be so construed as to require the regents to establish the several departments other than the normal and preparatory, as herein provided, until such time as, in their judgment, the wants and necessities of the people require.

The constitution of the State of Colorado provides for the government of the university as follows (Article IX):

SEC. 12. There shall be elected by the qualified electors of the State, at the first general election under this constitution, 6 regents of the university, who shall immediately after their election be so classified by lot that 2 shall hold office for the term of two years, 2 for four years, and 2 for six years; and every two years after the first election there shall be elected 2 regents of the university, whose term of office shall be six years. The regents thus elected, and their successors, shall constitute a body corporate, to be known by the name and style of "The regents of the University of Colorado."

SEC. 13. The regents of the university shall, at their first meeting, or as soon thereafter as practicable, elect a president of the university, who shall hold his office until removed by the board of regents for cause; he shall be ex officio a member of the board, with the privilege of speaking, but not of voting, except in case of a tie; he shall preside at the meetings of the board and be the principal executive officer of the university and a member of the faculty thereof.

SEC. 14. The board of regents shall have the general supervision of the university and the exclusive control and direction of all funds of and appropriations for the university.

The regents of the university receive a compensation of \$4 a day while actually employed in the business of the university. They also receive a mileage allowance equal to that allowed to members of the general assembly, but "no other pay, fees, or allowances whatever."



MAIN BUILDING, UNIVERSITY OF COLORADO. ERECTED 1875.





The first board of regents consisted of Junius Berkley, W. H. Van Giesen, S. W. Dolloff, C. Valdez, George Tritch, and F. J. Ebert.

On September 5, 1877, the university began its educational work under the direction of Dr. J. A. Sewall as president, assisted by Prof. J. E. Dow in the chair of ancient languages and Miss A. M. Sewall as assistant in the normal department, and with 44 students in attendance. During the year the number of students increased to 66, of whom 52 were in the preparatory department and 14 in the normal department. Out of 66 students 55 were residents of Boulder County and the remainder came from four other counties of the State. The average age of the students was 18 years. Tuition was free for all students, but all paid a matriculation fee of \$10 and a fee of \$2 a term for incidentals. The students in the preparatory department pursued the usual high-school studies. The normal class pursued, in addition to their other studies, courses in geography, arithmetic, English grammar, and other elementary subjects.

In the year 1878 the faculty was increased by the addition of Frank W. Gove, A. B., as instructor in mathematics, and Mary Rippon as instructor in German and French. In September of that year 8 pupils applied for admission to the classical course and 7 to the scientific course. The board, therefore, established college classes in these two courses, and thus was the college work of the university fairly begun, with classical and scientific courses of four years each proceeding to the degrees of Bachelor of Arts and Bachelor of Science. The faculty was small, but in spite of that fact courses of study were laid out which compare favorably with those given at that time in the smaller colleges of the East, and a system of elective studies was introduced based on that of the University of Michigan.

The first library in connection with the university was started by a literary society, the "Lyceum." The few books thus collected afterwards passed into the university library, which was founded by the munificence of a citizen of Boulder, Charles G. Buckingham, who, in the year 1878, gave the sum of \$2,000 for this purpose.

In the year 1881 chemical apparatus was supplied, at a total cost of about \$4,000.

In the year 1883 a year was added to the normal course and the degree of Pe.P. (Principal of Pedagogy) was offered to students completing the three years' course, to be followed after three years of successful teaching by the degree of Pe.B. (Bachelor of Pedagogy). This normal course was the same as the preparatory course, except that in the last two years the courses in languages were to be replaced by lectures in theoretical and practical pedagogy. In fact, very little pedagogical instruction was given. The normal course was maintained with more or less success until the year 1889, when the normal school was established at Greeley by act of the State legislature.

In the year 1884 the degrees of M. A. and M. S. were offered to any bachelor of arts or science who should have presented a satisfactory thesis and a statement of work done since graduation.

In the year 1883 the medical department was established, with 6 professors and 2 students. In the following year the number of medical students increased to 19. The general policy of the university at that time is expressed by President Sewall in the Fourth Biennial Report to the State superintendent of education:

It is estimated that not less than one hundred practitioners of medicine were coming to Colorado each year, and in many cases the supply not of the most desirable quality. It seems to be the settled policy of the State to present its educational advantages to all classes of its citizens seeking education, technical, literary, or professional. The board of regents believed that the taxpayer whose son desired to study medicine had the same rights as his brother who was receiving instruction in agriculture, mineralogy, chemistry, civil or mechanical engineering, surveying, or pedagogy.

The question of fees was duly considered, and it was thought that as the State gave instruction free in all its institutions, academical, technical, and agricultural, there could be no good reason for a new departure in its medical school. If onerous tuition fees were charged it would present the spectacle of making the noblest pursuit, that of making preparation for alleviating human suffering, dependent upon mere money qualifications and not ability, and this decision had additional weight from the fact that at the agricultural college veterinary surgery is taught without fees. The inference is that the State is willing to do as much for its citizens as for its animals.

The free public schools of our country, giving to all children, rich and poor alike, an opportunity to secure a common-school education, acts as a partial leveler and tends to make class distinctions less marked, while higher educational privileges go far to neutralize the evil tendencies of great unequal distribution of wealth. Abolish the free or State institutions of higher education and in a short time there would arise an aristocracy based upon wealth and intelligence, and the few with the elements of power—wealth and intelligence—could and would hold control of the great majority, for poverty with ignorance is no match for either wealth or intelligence.

In August, 1884, the board made arrangements for the erection of a hospital on the grounds of the university, to be modeled after the plan of the U. S. Army post hospitals and to accommodate 30 patients at rates varying from \$7 to \$14 a week. It was opened on January 1, 1885.

The medical course was to consist of three years of nine months each, but the student could obtain his degree when he was ready for the examination, provided that three full years had elapsed since beginning the study of medicine, and that he had attended two full courses of lectures at the university. Tuition was to be free, but there was a matriculation fee of \$5 and a graduation fee of \$10.

In the year 1883 a conservatory of music was established in connection with the university, with W. H. Mershon as licensed instructor and 17 students during the session of 1883-84, but its brief existence was terminated in the following year.

Equally short-lived was the school of pharmacy, begun in 1883 in connection with the department of medicine, and offering a two years' course of nine months each.



In May, 1886, Dr. Sewall tendered his resignation, but continued as acting president and professor of chemistry until July 1 of that year, when he was succeeded by Horace M. Hale, A. M., as president, and Charles S. Palmer, Ph. D., as professor of chemistry. At this time there were 132 students in all departments, with 9 professors in the college of liberal arts, and 7 professors in the department of medicine.

From 1885 to 1888 several new buildings were completed in addition to the hospital already mentioned, namely, the president's house, two cottages for the accommodation of students from a distance, and a medical hall.

In the year 1886 J. Alden Smith laid the foundation of the mineralogical and geological cabinet by the gift of a collection of minerals and fossils valued at about \$1,000.

In the year 1890 Woodbury Hall was completed at a cost of \$25,000. It has since been used as a dormitory for male students and is capable of accommodating about 50 students.

The university scientific society was established in the year 1888. It consisted of members of the faculty and ladies and gentlemen of Boulder who are interested in the study of scientific and philosophical questions. This society has continued to exist until the present time and meets once a month during the school year.

The usual college literary societies were established at an early date.

The earliest college paper was the Portfolio, first published in 1883. The present exponent of college life is known as Silver and Gold, and began its work in 1893.

On January 1, 1892, Dr. Hale resigned and James H. Baker was appointed president of the university. At this time there were 169 students and a faculty of 30 in the three departments, including the preparatory department, the college of liberal arts, and the medical school.

During the administration of President Baker the university has made great and continuous progress.

In the year 1892 an intercollegiate society for university extension was established in Colorado and a few courses of lectures were given, but since that time very little has been done along that line of work.

In the same year appears in the university catalogue the announcement of the organization of the Colorado Divinity School, in affiliation with the University of Colorado. It was to be located at Boulder, though not as a department of the university. A complete faculty of ten professors, belonging to eight distinct religious denominations, included among others Rev. Kerr B. Tupper, of the First Baptist Church of Denver, dean and professor of homiletics; Bishop John F. Spalding, D. D., professor of ecclesiastical history; Rev. Myron W. Reed, professor of ethics and social reform, and Rev. Frederick F. Kramer, secretary and instructor in Hebrew. The purpose of the school was to prepare young men and women for the work of the minis-

try. It was to be an independent institution, broad and catholic, and hospitable to the intellectual methods of modern times. The course of study was to continue for three years, and in the last year the students were to be under the members of the faculty representing the denomination they might desire to serve. Students were to register as special students of the university. Tuition to be free to residents of Colorado, with a matriculation fee of \$5 and a library fee of \$1. The school year to begin September 7, 1892.

It is not recorded that there were any students in the divinity school that year, and the attempt was abandoned. The experiment was looked upon as "the possible forerunner of milder and more rational methods in biblical criticism and theological investigation."

In September, 1892, the medical school, "which was languishing because of poor clinical advantages," was completely reorganized. Arrangements were made whereby the work of the last two years should be carried on in Denver "until sufficient hospital advantages should be secured at Boulder." This was not to be understood as a removal of the school to Denver, for the work of the first year and all the executive work was to be carried on in Boulder.

The law school was also established at Boulder in this year with a faculty of 29 professors and lecturers, and with 23 students during the first year. The old medical hospital became a dormitory and lecture hall for the students of law.

In the same year the board of regents authorized the establishment of a distinct school of technology for work in civil and electrical engineering.

The year 1894 marks the completion of the Hale Scientific Building. At the dedication of that building in March, 1895, the following resumé of the development of the university during the three years preceding was given by President Baker:

Of the present it is becoming to merely mention the facts of larger importance, such as follow: The organization of the preparatory school as a distinct department in a building by itself, and securing the cooperation of the city of Boulder in its support; the establishment of a law school; the reorganization of the medical school; the opening of the school of applied science; the addition of professors in the college; the organization of graduate courses; the increase of library and apparatus; the securing of an art collection through the efforts of Dr. Dennett, Dr. Brackett, and the generosity of Colonel Phillips; the donation of a valuable mineralogical collection through the efforts of Dr. Palmer and the generosity of citizens of Denver and Boulder; the improvement of grounds and buildings; the erection of part of an engineering building; the construction of a central heating plant; the increase of revenue; the close connection established with the high schools throughout the State; the generous cooperation of the press; the growth of loyalty to the university throughout Colorado; the laying of the foundation more broadly and firmly for the future rapid growth of the university.

The school of applied science was in fact opened in September, 1894, with Prof. Henry Fulton as dean and professor of civil engineering and with courses in civil and electrical engineering, leading to the degrees of B. S. (C. E.) and B. S. (E. E.).





WOODBURY HALL, UNIVERSITY OF COLORADO. ERECTED 1890.





HALE SCIENTIFIC BUILDING, UNIVERSITY OF COLORADO. ERECTED 1891.





During the eventful year 1892 it was decided to remove the preparatory school from the university grounds as soon as possible and to establish it in a building to be erected by the city of Boulder. This building was completed and occupied by the preparatory school in the autumn of 1895, with Henry White Callahan, Ph. D., as head master. According to the arrangement now in force the university pays one-third of all expenses and the city of Boulder pays the rest, and the school is conducted as a university preparatory school.

During the administration of President Baker vigorous measures have been taken to bring the high schools of the State into closer relations to the State university by extending the list of accredited high schools whenever possible and by personal visitation of the high schools by members of the college faculty. In the words of the catalogue, "It was thought that the university had not performed its whole duty when the departments were organized and made ready for the accession of students. A necessary and proper function of the regents and faculty is to go forth to the people and make known the existence and importance of higher education as provided by the State. Through the voluntary cooperation of a generous press, the efforts of members of the faculty in visiting schools, institutes, etc., and the use of circulars, a wide interest concerning the university has been aroused. A complete course to and through the university is the ideal attainment for every youth of Colorado. The natural thing for a graduate of a public high school who desires a higher education is to enter the university, and this as much because of the superior work done there as from a feeling of loyalty which all public-spirited citizens and all pupils in the public schools should entertain toward their State and their school system."

"High school day" was first celebrated in the spring of 1896, when 300 members of the graduating classes of the high schools of Denver and other towns in Colorado assembled at Boulder as the guests of the university.

In September, 1895, the Colorado School of Music was opened in affiliation with the university, but not as a department of the university.

In September, 1896, a dental department was opened in Denver with 19 professors and 10 students.

In June, 1897, the supreme court of the State decided that the university had no right under the constitution of Colorado to carry on part of its medical work in Denver. It was therefore necessary to provide hospital and clinical facilities at Boulder or to discontinue the work of the medical school. By means of a subscription of \$8,000 from the county and the city of Boulder, an appropriation of \$5,000 from the board of regents, and various contributions from citizens of Boulder, a hospital was erected near the university capable of accommodating about 40 patients. The medical school was reorganized, and the work has since been carried on at Boulder.



The same decision affected the dental department, which thereupon obtained a new charter as the Colorado School of Dental Surgery, and continued its work as an independent school in friendly alliance with the university, and its announcement was, for some years, published in the university catalogue.

In 1895 the medical course was lengthened from three years to four, and the law course from two years to three. Arrangements have since been made whereby a student may take the college course and the medical course in seven years and the college and law courses in six years.

In April, 1898, three new buildings were dedicated—the engineering building (completed), the gymnasium, and the chemistry building. These buildings were completed at a cost of \$30,000. This amount, together with \$5,000 for the hospital, was voted by the regents from the permanent land fund.

In the university catalogue the departments of the university are enumerated as follows:

I. College of liberal arts: Classical course, leading to the degree B. A.; philosophical course, leading to the degree B. Ph.; scientific course, leading to the degree B. S.

II. Graduate courses, leading to the degrees M. A., M. S., and Ph. D.

III. Colorado school of applied science: Civil engineering, leading to the degree B. S. (C. E.); electrical engineering, leading to the degree B. S. (E. E.); mechanical engineering, leading to the degree B. S. (M. E.).

IV. Colorado School of Medicine.

V. Colorado School of Law.

#### STUDENTS IN THE SEVERAL DEPARTMENTS.

The following table shows the number of students in the various departments of the university from the beginning until the present time. It is uncertain whether the figures for the earlier years represent one year's attendance or two.

Year.	Normal.	Preparatory.	College classes.		Medical school.	Law school.	Special.	Graduate students.	Total.
			Liberal arts.	Applied science.					
1877-78.....	14	52	.....	.....	.....	.....	.....	.....	66
1878-79.....	22	54	10	.....	.....	.....	.....	.....	86
1879-80.....	9	66	16	.....	.....	.....	.....	.....	89
1880-81.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1881-82.....	17	72	18	.....	.....	.....	6	.....	113
1882-83.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1883-84.....	31	100	13	.....	8	.....	a 17	.....	152
1884-85.....	.....	.....	.....	.....	19	.....	.....	.....	.....
1885-86.....	.....	85	28	.....	19	.....	.....	.....	132
1886-87.....	8	70	18	.....	7	.....	.....	.....	108
1887-88.....	22	71	31	.....	12	.....	.....	.....	136
1888-89.....	16	89	44	.....	29	.....	13	.....	191
1889-90.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1890-91.....	.....	98	37	.....	13	.....	24	.....	172
1891-92.....	.....	103	36	.....	11	.....	19	.....	169
1892-93.....	.....	158	77	.....	26	23	.....	8	286
1893-94.....	.....	146	85	.....	42	28	.....	5	306
1894-95.....	.....	192	106	11	51	19	.....	18	396
1895-96.....	.....	242	135	22	62	29	.....	20	509
1896-97.....	.....	276	162	29	78	26	b 10	29	600
1897-98.....	.....	273	198	38	33	39	.....	29	610
1898-99.....	.....	310	215	61	50	53	.....	25	700

a Music.

b Dental.



GYMNASIUM, UNIVERSITY OF COLORADO. ERECTED 1897.



## REQUIREMENTS FOR ADMISSION.

In 1880 the requirements for admission to the freshman class in the classical course were as follows:

Latin: Grammar, prose composition, Cæsar (three books), Cicero (four orations), Virgil (five books).

Greek: Grammar, prose composition, Xenophon (three books), Homer (one book).

Mathematics: Arithmetic, algebra, plane geometry.

In the catalogue for 1899 the requirements for admission to the same course are as follows:

Latin: Lessons, grammar, prose composition, Cæsar (four books), Virgil (four books), Cicero (seven orations).

Greek: Lessons, grammar, prose composition, Xenophon (four books), Homer (three books).

Mathematics: Algebra, plane geometry.

German or French.

Physics or chemistry or biology.

History: The equivalent of four hours a week for two years.

English: Rhetoric and the equivalent of the requirements of the New England Association of Colleges.

The system of receiving credits from high schools prevails, and but few matriculation examinations are held.

Students will be received from accredited schools upon certificate of the principal, provided that the work done covers the requirements for the course elected. Certificates from schools not accredited may be considered as the merits of each case may warrant.

In the year 1883, when the system of accredited high schools was introduced, there were 7 schools in Colorado thus accredited—in Denver, Pueblo, Leadville, Trinidad, Georgetown, and Golden. At the present time there are 31 of these schools, besides the State preparatory school.

## REQUIREMENTS FOR GRADUATION.

In the early years of the university the faculty was very small, yet the courses of study were modeled after those of the best Eastern colleges, and as early as the second year of the university's existence a system of elective studies was adopted, based on the system then in operation in the University of Michigan, and courses were offered in such subjects as astronomy, international law, and analytical chemistry.

The present system of basic, characteristic, and elective studies was introduced several years ago on the recommendation of a committee of the faculty. The basic requirements are the same for all candidates for a bachelor's degree. The characteristic requirements vary according to the degree sought. The electives are distinguished as major, minor, and free electives, and must be so arranged that the student shall do continued and unified work in at least two and not more than three departments. In order to obtain a bachelor's degree the student

must complete 26 full courses of five hours a week each during one semester, or one hundred and thirty hours in all. Bearing this in mind, the following requirements for the bachelor's degree may readily be understood:

1. *Basic*—English, ten hours; French or German, ten hours; mathematics, ten hours; psychology and logic, five hours.
2. *Characteristic*—For B. A., Greek, twenty hours; for B. Ph., Latin, twenty hours; for B. S., science, twenty hours.
3. *Elective*—Major, thirty hours; minor, twenty hours; free elective, twenty-five hours.

The courses offered in the various departments admit of considerable specialization on the part of the students. For example, the courses in history, economics, and political science are as follows:

1. Roman history, general.
2. Roman history, B. C. 63 to A. D. 37.
3. European history, 350 A. D. to 1453 A. D.
4. European history, 1453 A. D. to 1878 A. D.
5. Constitutional history of England.
6. Political and constitutional history of the United States.
7. General principles of economics.
8. Historical and practical economy.
9. History and criticism of economic theories.
10. Public finance.
11. Elements of jurisprudence.
12. Roman law.
13. European legal history.
14. Sociology.

The work of this department is done by one professor and an instructor. Similarly in each department there is a professor, and generally an instructor or assistant. In the college of liberal arts there are 11 full professors, 2 assistant professors, 4 instructors, and 8 assistants.

#### RELIGION.

Section 8, Article IX, of the constitution of Colorado provides as follows:

No religious test or qualification shall ever be required of any person as a condition of admission into any public educational institution of the State, either as teacher or student; and no teacher or student of any such institution shall ever be required to attend or participate in any religious service whatever. No sectarian tenets or doctrine shall ever be taught in the public schools, nor shall any distinction or classification of pupils be made on account of race or color.

During the early years of the university religious services were held in the college auditorium, consisting of reading of the Scriptures and the Lord's Prayer, but no teacher or student was required to attend. At the present time the exercises consist of announcements, short addresses, or reading of selections by the president, some member of the faculty or some prominent citizen, and singing. Church attend-



ance is optional, but students are advised to attend some one of the numerous churches in the town.

Public services are held in the college chapel every Sunday under the auspices of the Christian associations.

#### THE LIBRARY.

The library was founded by Charles G. Buckingham, of Boulder, who gave in all about \$2,500 for this purpose. The books have as a rule been selected with great care by the heads of departments, and the university has, therefore, an extremely good working library, better than many others twice as large. In addition to some 25,000 volumes the library has on file over 200 literary and scientific magazines and the principal newspapers of the State.

Prof. J. Raymond Brackett was the first librarian. His successors have been Charles E. Lowrey and Alfred E. Whitaker, the present librarian.

The following table shows the growth of the library during each biennial period since 1884:

Year.	Volumes.	Year.	Volumes.
1884.....	1,796	1894.....	9,354
1886.....	3,349	1896.....	13,432
1888.....	4,817	1898.....	18,756
1890.....	6,910	1899.....	a 20,000
1892.....	8,209		

a About.

#### FINANCES.

##### UNIVERSITY LANDS.

The original grant by Congress comprised 46,080 acres, of which 12,233.35 acres still belong to the university and yield a small income. The proceeds of the sale of university lands were used to form the permanent land fund. From October 1, 1896, to October 1, 1898, the total land income of the university was \$6,901.80. During that period it was deemed necessary to draw upon the permanent land fund to the extent of \$36,658.81, which it was hoped the State legislature would restore. At the present time the permanent land fund amounts to \$44,293.15 and is invested as far as possible in State warrants, yielding interest at 6 per cent.

##### STATE SUPPORT.

Since the year 1877 the university has received from the State treasurer the proceeds of a tax of one-fifth of a mill upon the assessed valuation of all property in the State. In addition, it has received special appropriations from time to time.

For the biennial term, 1896-1898, the university received from the general fund the sum of \$93,837.25.

Special appropriations have been granted as follows:

1874 .....	\$15,000	1893 .....	<sup>a</sup> 55,000
1876 .....	15,000	1895 .....	40,000
1878 .....	7,000	1897 .....	40,000
1883 .....	<sup>a</sup> 40,000	1899 .....	110,000
1891 .....	30,000		

In 1899 the State legislature voted a special appropriation of \$110,000 for a much-needed library building and for current expenses of the university, but failed to make provision for revenue sufficient to meet this and similar appropriations for other State institutions. Governor Thomas authorized the regents to secure a loan of \$70,000. This amount was raised by banks and private citizens. The thirteenth general assembly voted a special appropriation of \$120,000 and provided for the payment of the citizens' loan. The latter, however, has not been paid.

The university has been the recipient of a number of gifts from time to time, none of them of great value, but making a total of \$38,763.66 up to October 1, 1898.

#### EXPENSES.

The following table shows the total expenses of the university for every biennial term ending October 1, from 1878 to 1898:

1876 .....	\$45,000.00	1890 .....	\$85,964.76
1878 .....	13,029.09	1892 .....	125,609.36
1880 .....	23,899.08	1894 .....	102,391.35
1882 .....	29,965.71	1896 .....	132,278.73
1884 .....	65,840.84	1898 .....	144,939.03
1886 .....	55,661.05		
1888 .....	57,990.03	Total .....	882,569.03

#### INVENTORY OF UNIVERSITY PROPERTY.

On October 1, 1898, the university property at Boulder was estimated as follows:

Grounds .....	\$37,100	Apparatus .....	\$23,637
Buildings .....	193,200	Collections .....	4,192
Furniture .....	11,300		
Library .....	33,000	Total .....	302,429

#### SOURCES OF INFORMATION.

The University catalogues.

The biennial reports to the superintendent of public instruction.

Personal statements of President Baker, Mr. Whitaker, and others.

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<sup>a</sup>About.



PHILLIPS ART COLLECTION, SCULPTURE ROOM, UNIVERSITY OF COLORADO DONATED BY MR. AND MRS. IVERS PHILLIPS, 1892.





## Chapter III.

### THE UNIVERSITY OF DENVER.

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The first attempt to establish a college in Colorado was made by Dr. John Evans, second Territorial governor of Colorado and one of the founders of the Northwestern University at Evanston, Ill. Through his efforts the people of Denver became interested in the scheme, and it was decided to establish the Colorado Seminary as an institution of higher education in connection with the Methodist Episcopal Church. Money was raised by subscription and a charter was granted by the Territorial Legislature and signed by the Governor on March 5, 1864. The charter reads as follows:

#### AN ACT to incorporate the Colorado Seminary.

*Be it enacted by the council and house of representatives of Colorado Territory:*

SECTION 1. That John Evans, Samuel H. Elbert, W. N. Byers, H. Burton, A. B. Case, J. G. Vawter, A. J. Gill, W. D. Pease, Edwin Scudder, J. H. Morrison, Warren Hussey, J. W. Smith, D. H. Moffat, jr., R. E. Whitsitt, C. A. Cook, John Cree, Amos Steck, J. M. Chivington, J. B. Doyle, Henry Henson, Amos Widner, John T. Lynch, Milo Lee, J. B. Chaffee, Lewis Jones, O. A. Willard, W. H. Loveland, and Robert Berry be, and they are hereby, constituted a body politic and corporate for the purpose of founding, directing, and maintaining an institution of learning, to be styled the Colorado Seminary, and in manner hereinafter prescribed to have perpetual succession, with full power to sue and be sued, plead and be impleaded, adopt and alter at pleasure a seal, acquire, hold, and convey property, real, personal, and mixed, to the extent they may judge necessary for carrying into effect the objects of this corporation, and generally to perform such other acts as may be necessary and proper therefor.

SEC. 2. Said trustees at their first meeting shall be divided into four classes of seven in each class, which classes shall hold office for one, two, three, and four years, respectively, dating from the first day of July, eighteen hundred and sixty-four. Their successors shall be appointed, whenever terms expire or vacancies for any cause exist, by the annual conference of the Methodist Episcopal Church within whose bounds the city of Denver may be included; but all of said trustees and their successors shall continue in office till their successors are elected.

SEC. 3. No test of religious faith shall ever be applied as a condition of admission into said seminary, but the trustees shall have power to adopt all proper rules and regulations for the government of the conduct of teachers and pupils, and the management of all affairs pertaining to said institution.

SEC. 4. They shall have full power to confer all degrees and emoluments customary to be given by similar institutions.

SEC. 5. Such property as may be necessary for carrying out the design of the seminary in the best manner, while used exclusively for such purposes, shall be free from all taxation.



SEC. 6. In all cases a majority of the board of trustees shall constitute a quorum for transacting any business, or said majority may vest the power of the trustees in an executive committee, or agent of their number, at pleasure.

SEC. 7. This shall be deemed a public act and be in force and take effect from and after its passage.

The trustees immediately proceeded to acquire a site and to erect a building. The first building was a two-story structure at the corner of Fourteenth and Arapahoe streets, sufficiently large for a school of about 200 students. It now forms a part of the building used by the school of music.

By means of an exhibition in the seminary building and a fair at the old Lawrence Street Church, about \$1,200 was raised for furnishing the building. In September, 1864, the seminary was opened with Prof. G. S. Phillips as president. After about six weeks Professor Phillips resigned on account of ill health and was succeeded on November 14 by Rev. George Richardson, pastor of the Lawrence Street Church, who carried on the school for two years as an academy, with pupils of all the grades from primary to academic. During the first year there were in all 5 teachers and 103 pupils. There was a musical department and classes in art, but no students of college grade.

Mr. Richardson resigned because of ill health in 1866, and was succeeded by the Rev. B. T. Vincent as nominal president, with Miss S. E. Morgan as preceptress and actual director of studies. The seminary was continued for about two years longer, but contracted a debt of about \$3,000, and the property was therefore sold. Governor Evans bought it in and continued to hold it until the seminary came to life again as the University of Denver.

In the year 1878 the trustees of Colorado Seminary made a contract with Rev. D. H. Moore, A. M., D. D., of Cincinnati, Ohio, according to which the trustees were to erect suitable buildings, while Doctor Moore was to furnish the buildings, supply teachers, and operate the school for a period of five years. Thereupon the trustees proceeded to raise money for the buildings. Over \$50,000 was collected largely through the efforts of Earl Cranston and F. C. Millington. J. W. Bailey subscribed \$10,000, and ex-Governor John Evans gave \$15,500 in cash and ten lots of land on the corner of Fourteenth and Arapahoe streets, with the old seminary building thereon, valued at \$20,000. During the years 1879 and 1880 the old building was greatly enlarged by the addition of a third story, and a large wing on Fourteenth street. In the following year another wing was added on Arapahoe street and the building was completed, as it stands to-day, at a total cost of nearly \$70,000 and without any considerable debt.

The new school was called the University of Denver, while the property and all financial matters remained in control of the Colorado Seminary, as chartered in 1864. Articles of incorporation were



HAISH BUILDING, UNIVERSITY OF DENVER.



adopted in 1880 and filed under the "Statute for corporations not for profit." These articles, as amended June 8, 1898, read as follows:

ARTICLE I. The name of this society shall be the University of Denver.

ARTICLE II. The object of this society shall be the advancement of the educational interests of Colorado; the promotion of all the sciences, arts, and learned professions, and to form a university which shall have power to establish a system of instruction in any or all the departments of learning; to create fellowships; to appoint a board of examiners and, upon examination or satisfactory recommendation, to confer marks of distinction and all degrees, honorary or otherwise, usual to a university, upon all such candidates as shall be found worthy thereof.

ARTICLE III. The members of this society shall be the secretary, for the time being, of the Colorado Annual Conference of the Methodist Episcopal Church; the secretaries, while in office, of such annual conferences as shall hereafter be organized within the territory now occupied by the said Colorado Annual Conference; the presiding elders, for the time being, of the aforesaid annual conference or conferences; the president, for the time being, of the Colorado Seminary, and the members of the board of trustees, for the time being, of the Colorado Seminary.

ARTICLE IV. The officers of this society shall consist of a board of seven trustees, all of whom shall be members of the society, who shall be elected by ballot annually on the first Tuesday in June, and shall hold their office until their successors shall have been chosen; and the following-named persons, viz, H. W. Warren, E. M. Cranston, Joseph C. Shattuck, J. W. Gilluly, C. B. Spencer, W. C. Madison, and J. H. Merritt, shall constitute such board of trustees until the first regular election and until their successors are elected; and if for any reason such election is not held on said day in June, it may be held at any subsequent regular or called meeting, due notice of such election having been served by mail or personal service on all the members of the society. There shall be a president, vice-president, secretary, and treasurer, and such other officers as shall be provided for by the by-laws of the society, all of whom shall be elected by the board of trustees.

ARTICLE V. The trustees of this society shall have power to make all necessary and prudential by-laws, not inconsistent with the constitution and laws of the State, as they may deem proper for the management of the affairs of the society.

ARTICLE VI. The constitution may be altered or amended by a vote of two-thirds of all the members of this society.

The original reading of Article IV was as follows:

The officers of this society shall consist of a board of seven trustees, who shall be elected by ballot annually on the first Tuesday in September, and shall hold their office until their successors shall have been chosen and the following-named persons, viz, John Evans, O. L. Fisher, J. Durbin, John W. Bailey, John A. Clough, Earl Cranston, and J. H. Merritt shall constitute such board of trustees until the first regular election and until their successors are elected. There shall be a president, vice-president, treasurer and secretary, and such other officers as shall be provided for by the by-laws of the society, all of whom shall be elected by the board of trustees.

The university opened in October, 1880, with the following departments: Collegiate, college preparatory, junior preparatory, business department, college of medicine, college of music and art, and with a faculty of 36 professors and instructors, including the chancellor, Dr. Moore. The college preparatory was equivalent to a high school with a four years' course. The junior preparatory was equivalent to a common school with the usual eight grades. During the first year

there were 150 students in attendance. During the second year there were 139 pupils in the junior preparatory, 53 in the college preparatory, 8 in the college proper, including 4 freshmen, 1 sophomore, and 3 irregular and special students; 26 in the business department, 15 in the college of medicine, 104 in the department of music, and 83 in the art classes, making a total of 428 students, including some entered in more than one department.

The central part of the university building was used for class purposes. The wings were largely occupied by students in residence and by the chancellor and members of the faculty. The faculty of the college of liberal arts consisted of Rev. David H. Moore, A. M., D. D., chancellor and professor of philosophy and belles-lettres; Rev. Earl Cranston, A. M., lecturer on Christian evidences; Frances A. Fish, A. M., lady principal and professor of mathematics; Herbert A. Howe, A. M., professor of mathematics; Sidney H. Short, B. S., professor of physics and chemistry; C. Gilbert Wheeler, A. M., Ph. D., professor of botany and chemistry; Ovando B. Super, A. M., professor of languages; Ida de Steiguer, instructor in Italian; Eugenie Mimeur, instructor in French and German; and Hon. Bela M. Hughes, lecturer on international and constitutional law.

Three college courses of four years each were offered—the scientific course, the classical course, and the course in mining engineering, leading, respectively, to the degrees of B. A., B. S., and M. E. Later the literary course was added, leading to the degree of B. L.

As in the case of all the Colorado colleges, an attempt was made to keep the requirements for entrance and for graduation at least on a level with those of Eastern colleges. Special attention was given to work in chemistry and mining because of the position of Colorado as a great mining State, and good laboratories were at once established. The library also made a good beginning through donations in money and books by friends of the institution.

In the college of medicine a three year's course was offered, following the recommendation of the American Medical Association, and leading to the degree of Doctor of Medicine.

In the department of music the degree of Bachelor of Music was offered on the completion of a course of four years. The university also offered the degree of Bachelor of Painting to students completing satisfactorily the required technical work, together with a literary and scientific course of four years.

Students desiring to fit themselves for the profession of teaching were recommended to avail themselves of courses offered in the preparatory department.

The university thus began its work in October, 1880, with a good faculty, a considerable number of students, and excellent prospects.

In the year 1882 a separate building was erected on Arapahoe





UNIVERSITY HALL, UNIVERSITY OF DENVER.



street for the accommodation of the junior preparatory department, at a cost of about \$12,000.

In December, 1883, a telescope was bought for the university by a number of friends of the institution. It was an excellent instrument, with a 5-inch objective, made by Alvan Clark. A telescope of 1½ inches was presented by Nelson Forbes, of Denver. The larger instrument was mounted in an observatory above the junior preparatory building and served the purposes of the professor of astronomy until the erection of the Chamberlin Observatory at University Park.

In the year 1884 the beginning of a mineralogical collection was made by the purchase of the Cray cabinet.

In the year 1884 Mrs. Elizabeth Iliff-Warren made the offer of \$100,000 for the endowment of a school of theology, on the condition that \$50,000 should be subscribed for endowment in the college of liberal arts.

In the year 1885 the contract of the university with Chancellor Moore expired. The chancellor had lost heavily in his undertaking. In consideration of this fact the trustees decided to purchase the chancellor's interest in the university for the sum of \$10,000 and to undertake the management of the school, while still retaining Dr. Moore as chancellor.

During the next two years Dr. Moore was absent a good deal because of business interests, and the work of the university was largely directed by Dr. J. C. Shattuck, dean of the faculty of liberal arts. In September, 1887, Dr. Moore again assumed full charge and continued as chancellor of the university until June 11, 1889.

In the year 1885 a manual-training school was opened in connection with the university. Mr. Jacob Haish, manufacturer of barbed wire at De Kalb, Ill., had become interested in the project through the efforts of Bishop Warren and had made to the university the offer of one-half of his receipts from the sale of wire in Colorado, Wyoming, New Mexico, and Utah until they should reach the sum of \$50,000. The sales were not sufficient to supply the entire amount, but from the year 1886 to June 10, 1890, Mr. Haish gave to the university the sum of \$40,000, which was used in the erection of a large building on the corner of Fourteenth and Arapahoe streets, opposite to the old university building. The building was erected on a piece of land purchased by the trustees for that purpose and was completed in the autumn of 1888. It was used at first for the accommodation of the manual-training school and the school of medicine.

The manual-training school began in the session of 1885-86 with 11 students and continued to exist until the session of 1890-91, when there were 39 students in attendance. The opening of a manual-training high school by the city of Denver rendered the existence of this department in connection with the university no longer necessary.

The building has since been the home of the schools of medicine, law, and dentistry.

In the year 1888 a college of pharmacy was opened, offering a course of study of two years' duration. This department was continued until the session of 1894-95, with an attendance of students ranging from 11 to 24.

In the same year the school of dentistry was opened, with 10 students in attendance.

Ever since the year 1880 the founders of the university had in mind a suburban site as the permanent home of the university, like that of the Northwestern University, at Evanston, Ill., with which Governor Evans had been intimately connected as one of the founders and benefactors. With this object in view, several suburban sites were examined, among them the mound in McCullough's Addition. In 1884 Governor Evans offered to donate a quarter section in the neighborhood of Swansea Addition, and it was practically decided to locate the university there. However, on account of the growth of manufacturing interests in that part of Denver, it was afterwards thought better to look for another site. In 1884 the Rev. F. C. Millington was elected financial agent of the university and devoted himself with great energy to the work of raising money and securing a suitable suburban location. This he finally found on the land of Mr. Rufus Clark, some 5 miles south of the center of the city. Rufus Clark at first offered to give a block of 40 acres, on condition that the university buildings should be built thereon. Afterwards he increased his gift to 80 acres, and other property holders in the neighborhood made gifts in land and money. It was therefore decided to establish the university at this place. A half section of land, or 320 acres, immediately adjoining the gift of Rufus Clark was bought from R. M. St. Clair and his sister, Mrs. C. F. Truesdale, for \$75 an acre. The university thus in the year 1886 became possessed of 400 acres of land, magnificently situated, which received the name of "University Park." The report of the financial agent on June 16, 1886, made the following statement:

During the present year steps have been taken which place the university on a much better foundation than ever before. Nearly 500 acres have been secured on an elevation overlooking the city and commanding an incomparable view of the mountain range and surrounding country, on which has been laid out, with broad avenues and spacious parks, a town site with over 2,500 lots, including a large campus, for the future site of the university. One-fourth of each block in this town, which is known as "University Park," is to be retained in perpetuity for the endowment of the school, while the proceeds of the sales of the remainder will be devoted to other purposes, in the discretion of the board of trustees.

At this time Park lots were held at prices ranging from \$300 to \$400 a pair. The decision to establish the university at University Park induced speculators in real estate to buy land in the neighborhood, and with the growth of the Denver "boom" prices of land rose in propor-





THE ILIFF SCHOOL OF THEOLOGY.





tion. About the year 1890 Park lots were held at \$800 and \$1,000 a pair. The policy of the university is well expressed in the catalogue for 1889-90:

Lots will hereafter be sold to parties who will build, and they will rise in value to \$500, and soon to \$1,000 and \$2,000. By this probable rise in value and by donations the University of Denver will grow strong, while its revenues, if well managed, will sustain it in its great work. We can not afford to damage the future of the university by hastening to sell its lots before they become valuable or by using in operating expenses its principal in excess of its revenues.

In the year 1888 Mr. H. B. Chamberlin, of Denver, announced his intention to erect at University Park an astronomical observatory at a cost of about \$40,000.

On June 11, 1889, Chancellor Moore resigned the position which he had held for nine years, during which he had done a valuable pioneer work. The number of students in all departments was 484, the largest attendance since the beginning of the university. The prospects of the university seemed exceedingly bright. The gross assets were reported as about \$700,000 and the liabilities as only \$34,000, leaving a balance of over \$650,000 to the credit of the university. The statement of income and expenditure was, however, not so satisfactory. The income for the previous year was \$22,787.95 and the expenditures \$29,410, leaving a deficit for the year of \$6,622.05. In the words of the financial agent—

No business man but can see that an annual deficiency, unless provided for in some other way than by drawing upon the principal or endowment funds of the institution, must sooner or later result in bankruptcy, however great its principal may be, when such a course of financiering is begun.

In view of the financial condition, it was decided not to elect a successor to Chancellor Moore at that time. During the ensuing year the position of acting chancellor was filled by Dr. Ammi B. Hyde, professor of Greek in the college of liberal arts.

On July 3, 1889, Mrs. Elizabeth Iliff-Warren fulfilled her promise, made in 1884, to give \$100,000 for the endowment of a school of theology. The \$50,000 which was to have been raised as the condition of the above gift had not been entirely subscribed, but Mrs. Warren nevertheless gave to the trustees her note for \$100,000, to be paid within five years and bearing interest at 6 per cent. At the same time Mr. W. S. Iliff announced his intention of erecting one or more buildings for the Iliff school of theology, at a cost of \$50,000.

The condition above mentioned was fulfilled on July 21, 1890, when ex-Governor Evans gave lots and buildings on Market street, Denver, then valued at \$100,000, for the endowment of the chancellor's and woman's chairs.

In June, 1890, William F. McDowell, A. M., Ph. D., pastor of the First Methodist Episcopal Church at Tiffin, Ohio, was elected chancellor of the university.

At that time the preparations for moving the university to University Park had been fairly begun. On April 3, 1890, the corner stone of university hall was laid. For this building subscriptions were obtained amounting to over \$50,000. Many of the subscribers were owners of real estate in the neighborhood, to whom the existence of the university would be of great benefit. Also, most of these subscriptions were made conditional upon the completion of the building within a certain time. It was claimed that the building was not completed at the appointed time. Presently the real-estate "boom" collapsed. Few of the subscriptions were ever paid, and the debt of the university was increased by about \$80,000.

The building was finished and dedicated on February 22, 1892. Since that time it has been the home of the college of liberal arts.

The corner stone of the building erected by W. S. Iliff for the Iliff school of theology was laid on June 8, 1892. The building was completed and opened for students on September 21, 1892, and the school of theology began its work with a faculty of 2 professors. Twelve students were in attendance during the first year and 25 during the second year.

The Chamberlin Observatory was begun in 1889 and finished in 1894, at a total cost of \$55,000.

Several other buildings were erected for university purposes, including Wycliffe cottage as a residence for young ladies attending the university.

The catalogue for the year 1890-91 shows the condition of the university at that time. There were no less than 10 different departments, including the college of liberal arts, with 30 students; the college preparatory, with 128 students; the junior preparatory, with 102 students; the business college, with 392 students; the college of fine arts, the college of music, the college of medicine, the college of dentistry, the college of pharmacy, and the manual-training school, besides a course of lectures on law with 35 students in attendance. The total enrollment, deducting students enrolled in more than one department, was 848. With regard to the finances of the university the following statement is made:

The entire property of the university is now over a million dollars, much of it in land and other property, and therefore unproductive at present.

It would have been well had the university possessed less land and more money. It would also have been well had there been more concentration of effort and less expansion. It is easy to see that now; it was not so easy to see it then. As has been well said by a friend of the university, "The trustees gave the same attention to the university's affairs that they did to their own." Nobody was to blame. It was a mistake. The "boom" did not continue. Land values fell. The prospective million dollars could not be realized. Many friends

of the university became poor. The university, with Colorado and the country as a whole, entered upon a period of depression.

The administration of Chancellor McDowell covers this period of depression. On moving the college of liberal arts from the city to the park the junior preparatory department was discontinued. The manual-training school, the business college, and the college of fine arts also came to an end. The college of music was discontinued for several years. Later the school of pharmacy ceased to exist. The burden of debt was felt. Salaries were paid at irregular intervals. Sales of land were made with difficulty. Subscriptions were few.

In spite of these difficulties the other departments were held together and considerably strengthened. The faculty of the college of liberal arts increased in numbers and efficiency. The number of college students steadily increased. The courses of study were improved and the standards were maintained. The system of elective studies was much expanded. A certain amount of university extension work was done by the chancellor and other members of the faculty. The university even attempted to do post-graduate work whenever students applied for it. The school of medicine was reorganized and greatly improved. The school of law was organized with a complete faculty and a two years' course, and was opened on October 3, 1892. Since then the course has been extended to three years. The school of music revived in 1895, and has continued to live and prosper since then. In all the surviving departments the number of students has increased, until in the session 1898-99 there were 607 students in attendance, or more than ever before in the history of the university if we leave out of account the students of the business college, whose numbers swelled the total in the year 1891.

At the present time the departments of the university are 7 in number, including the college of liberal arts, the college of medicine, the school of law, the Iliff school of theology, the college of dentistry, the college of music and fine arts, and the preparatory department.

The colleges of medicine, law, and dentistry occupy the Haish Building, and the college of music occupies the old university building. These departments are entirely self-supporting.

In June, 1899, Chancellor McDowell, to whom the university owes much of its success during a very trying period, resigned his office to become secretary of the board of education of the Methodist Episcopal Church. Pending the appointment of a new chancellor, the work of administration in the college of liberal arts devolved upon the dean and professor of astronomy, Dr. Herbert A. Howe, who has been connected with the university since the beginning.

In November, 1899, Rev. Henry A. Buchtel, D. D., LL. D., pastor of Calvary Methodist Church at East Orange, N. J., and formerly pastor of Trinity Methodist Episcopal Church in Denver, was elected

chancellor of the university. Dr. Buchtel was well known in Denver, and his election was unanimously approved by the friends of the university. He has succeeded in placing the university upon a sound financial basis.

#### STUDENTS.

The following table shows the attendance of students from 1881 to 1899 in all the departments now maintained:

Year.	Liberal arts.	College preparatory.	Music and art.	Medicine.	Dentistry.	Law.	Theology.	Special.	Post-graduate.	Total, deducting those counted twice (where possible).
1881-82	8	53	187	15						263
1882-83	10	30	131	21				30		222
1883-84	10	57	125	23				12		227
1884-85	13	62	136	20				20		256
1885-86	20	77	113	27						237
1886-87	20	72	113	20						225
1887-88	19	106	131	36						291
1888-89	24	143	140	29	10					347
1889-90	30	116	171	30	10					377
1890-91	30	128	171	35	17			8	3	412
1891-92	33	121		48					3	207
1892-93	47	107		45		53	12		7	271
1893-94	70	84		45		67	25		9	300
1894-95	49	67		44	24	52	17		9	262
1895-96	75	84	193	43	28	54	34		14	478
1896-97	75	85	170	52	28	52	32		15	492
1897-98	65	123	186	65	47	58	35	14	16	598
1898-99	84	94	204	52	49	42	27	46	20	607

#### GRADUATES.

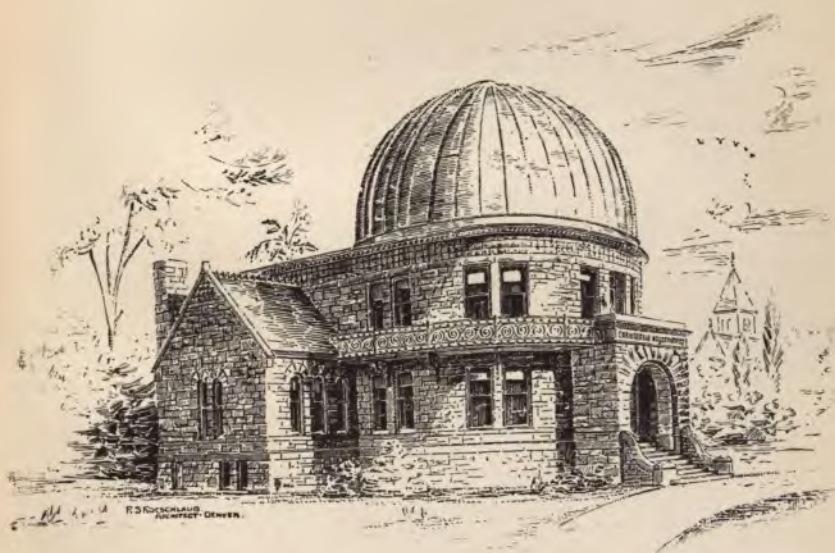
*Degrees conferred by the university since the year 1880.*

Year.	A.B.	L.B.	Ph.B.	S.B.	B.O.	LL.B.	S.T.B.	M.B.	A.M.	LL.M.	Ph.G.	M.D.	D.D.S.	Ph.G.	LL.D.	D.D.	Total.
1880												1					1
1881																	
1882												5					5
1883												5					5
1884	1								1			5					7
1885	3								1			6					10
1886	1	1						1	1			10					14
1887				1								2					3
1888	4											8					12
1889	1			1								7	5				14
1890	3			2							1	4	11	4			25
1891	5			1					1			7	6	4			24
1892		2										12	4			1	19
1893	2	1		2		6						16	1	4			32
1894	6	2				13					1	9	3	3		1	38
1895		1				14						13	2	4			34
1896	7					12	3				1	7	8	4			42
1897	5	2		2		10	5		2	2		9	8			3	50
1898	7	1		3	1	21	2				1	12	5				54
1899	9		1	3	4	15	5		2			11	8		2		60
Total	54	10	1	15	5	91	15	1	8	2	6	150	61	23	2	5	449

#### REQUIREMENTS FOR ADMISSION.

These are practically the same as the requirements in Colorado College and the State University, and are equal to the entrance require-





CHAMBERLIN OBSERVATORY, UNIVERSITY OF DENVER.



ments of Eastern colleges. The system of receiving credits from high schools and the general method of admitting students does not differ essentially from that of the other colleges.

#### REQUIREMENTS FOR GRADUATION.<sup>a</sup>

Three college courses are offered—the classical, the philosophical, and the scientific—leading, respectively, to the degrees A. B., Ph. B., and S. B. Eighteen recitations a week, or their equivalents, for four years, are required to qualify a student for a bachelor's degree. In each course certain studies are required and certain others elective. In the freshman year nearly all the work is required. As the student advances the required studies are less and the electives more numerous, until in the senior year all the studies are elective. It is planned to extend the system of electives as soon as possible.

The courses offered by the professor of history and economics are as follows:

1. American Revolution.
2. French Revolution.
3. History of the nineteenth century.
4. Constitutional history of England.
5. Constitutional history of the United States.
6. Historical seminary.
7. Economic history.
8. Elementary economics.
9. The wages system.
10. Advanced economics.
11. Public finance.
12. International law.
13. Municipal government.

In the whole university there are about 172 professors and lecturers.

#### RELIGION.

The general attitude of the university in this regard is thus stated in the early catalogues:

The university is under the auspices of the Colorado Conference of the Methodist Episcopal Church. Its management is thoroughly Christian, but in no wise sectarian.

In the college of liberal arts, students are required to attend religious services in the college chapel every day.

#### THE LIBRARY.

In the early years of the university the library was founded by donations of books and money by friends of the university. College students and students of the preparatory department pay an annual library fee of \$3. The money thus obtained is used in the purchase

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<sup>a</sup>Several changes since made.

of books and magazines. The library of the college of liberal arts is not large, but the books have been carefully selected and are well adapted for undergraduate work.

The following statement shows the number of volumes in the libraries of the several schools, exclusive of pamphlets:

	Volumes.
College of liberal arts .....	5,000
School of theology .....	4,000
School of law .....	3,000
Total .....	12,000

Students also have free access to the various public libraries in the city of Denver, which contain in all over 100,000 volumes.

#### THE CHAMBERLIN ASTRONOMICAL OBSERVATORY.

The observatory is the gift of the late H. B. Chamberlin. It is situated at University Park. There are two stone buildings. The smaller of these, called the "students' observatory," shelters a 6-inch equatorial refractor, made by Grubb, of Dublin, and a 2-inch transit instrument.

The main building is 65 feet long and 50 feet deep. It is crowned by an iron dome, the apex of which is more than 50 feet from the ground. The 20-inch equatorial refractor is the principal instrument. The object glass is from the hands of Alvan G. Clark, and the crown lens is reversible for photography. G. N. Saegmuller, of Washington, D. C., is the maker of the mounting, which embodies some novel features and is of the highest order of mechanical excellence. This telescope is one of the largest and finest in this country, and is regularly employed in original research. The subsidiary instruments are a 4-inch steel meridian circle, a standard mean-time clock, a standard sidereal clock, chronometers, a chronograph, a sextant, a solar transit, etc. The cost of this gift was over \$50,000.

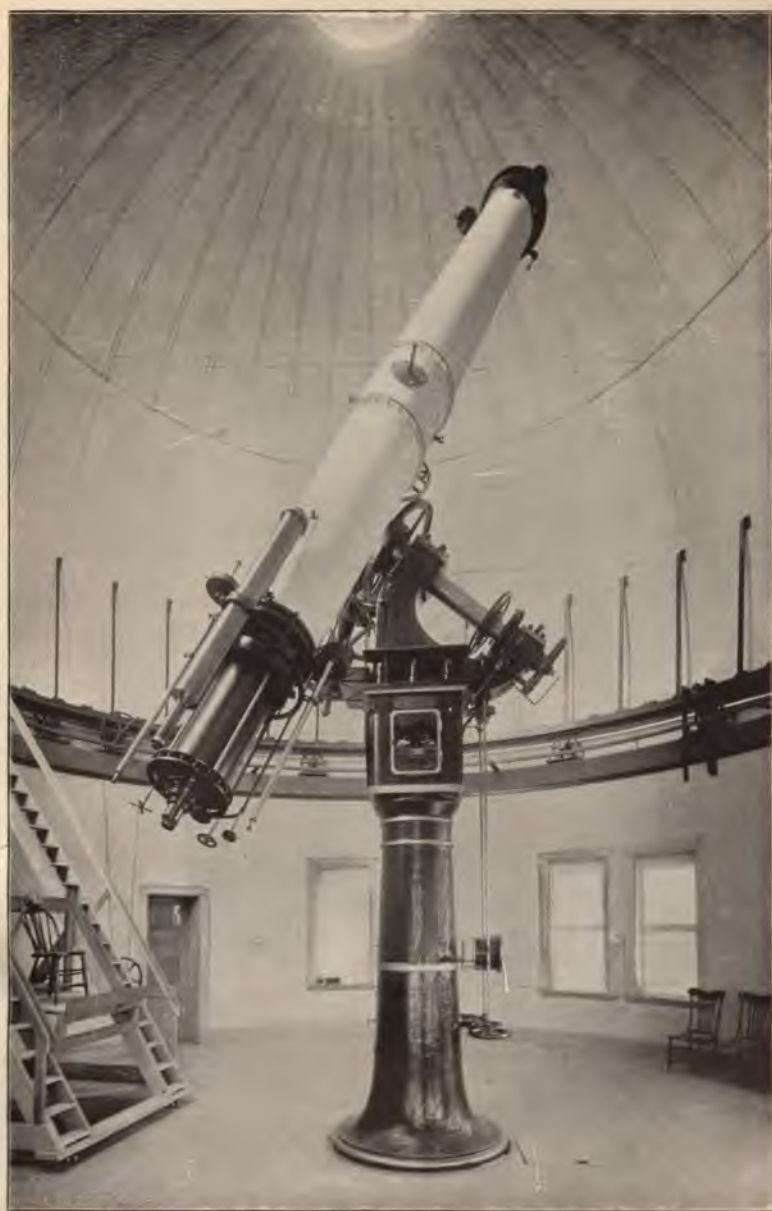
The observatory is in charge of Dr. Herbert A. Howe, professor of astronomy and dean of the faculty of liberal arts, the only member of the present faculty who was with the university in 1880.

#### INCOME AND EXPENDITURE.

The university is supported by gifts, by fees, by interest on its productive endowment, and by the sale of lots in University Park. The principal benefactors have already been mentioned. Many others have given sums ranging from \$1 to \$10,000. Throughout the conference collections are taken annually for the university.

The endowment of the university, exclusive of buildings used entirely for university purposes, but including the endowment of the school of theology, may be estimated at \$518,000, of which \$268,000 is productive.

Students in the college of liberal arts and in the preparatory department pay a "tuition fee" of \$10 per term, a library fee of \$1 per term, and an athletic fee of \$2 a year, making \$35 per year. In the professional schools the fees are higher. In the school of theology tuition



THE GREAT TELESCOPE, UNIVERSITY OF DENVER.





is free. The schools of medicine, law, and dentistry occupy one of the university buildings, but are otherwise supported by receipts from fees.

The school of music is not a source of expense to the university, and even pays rent for the building it occupies. The college of liberal arts is the only department of the university that is not in some sense self-supporting. In this department the annual running expenses amount to about \$30,000.

#### THE DEBT.

There was no considerable debt before June, 1885, when the trustees bought Dr. Moore's interest in the university. The following statement gives in brief the history of the debt since that time:

June, 1885 .....	\$10,000
June, 1886 (University Park purchased) .....	39,500
June, 1887 .....	35,567
June, 1888 .....	32,746
June, 1889 .....	34,512
June, 1890 (repairs, \$28,869) .....	75,839
June, 1891 .....	79,489
June, 1892 (university hall built) .....	145,333
June, 1893 .....	155,503
June, 1894 .....	159,245
June, 1895 .....	157,384
June, 1896 .....	160,446
June, 1897 .....	172,399
June, 1898 .....	156,739
June, 1899 .....	167,616

#### VALUE OF PROPERTY.

All property is held under the charter of the Colorado Seminary. The seminary owns land at University Park worth at a low estimate \$300,000. The various buildings owned by the seminary in Denver and at University Park are safely valued at \$400,000, making the total valuation of lands and buildings \$700,000.

#### SOURCES OF INFORMATION.

The university catalogues and circulars.

Miscellaneous collections by Dr. H. A. Howe and Prof. E. B. T. Spencer.

Personal statements of Rev. George Richardson, Dr. J. C. Shattuck, and Dr. H. A. Howe.

## Chapter IV.

### THE COLORADO SCHOOL OF MINES.

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Colorado has been a mining State since the beginning, and it is no wonder that the establishment of a school of mines was proposed at an early date.

The first real attempt to establish such a school was made by the Territorial legislature in 1870, when a small sum was appropriated for the erection of a building.

A message of Governor E. M. McCook to the house of representatives of the legislature of Colorado Territory on January 3, 1872, contains the following statement:

The commissioners appointed by the third section of an "Act to establish a school of mines," approved February 10, 1870, have briefly reported to me that they have received from the Territorial treasurer the amount appropriated by said act for the erection of a building, and that they have expended the same in the construction of a substantial edifice of brick, which has not been entirely completed for want of funds to finish the same. It is partly-occupied, however, by the library, the herbarium, and cabinets for specimens in natural history, together with the philosophical apparatus of the institution. I do not deem it advisable to recommend any further appropriation for this purpose until the commissioners may have submitted some definite plan indicating the objects they have in view, accompanied by an estimate of the amount of money possibly required to carry out these objects. Without this the legislature might be induced to make appropriations from year to year which may not result in any definite good to the people of the Territory.

Nothing further was done until the Territorial legislature in 1874 passed an act which was approved on February 9 of that year, making an appropriation of \$10,000, and thus practically establishing the School of Mines.

A building was erected by the State near the buildings of Jarvis Hall, about a mile north of Golden, where the industrial school now stands. Presumably this building was the one commenced after the act of 1870, but unfinished in 1872. The school was at first under the wing of Jarvis Hall, a boarding school for boys established by Bishop Randall, of the Protestant Episcopal Church.

During the year 1874-75 the school was not patronized as had been expected, and in the following year the work seems to have been discontinued.

The Territorial legislature appropriated in 1876 the sum of \$3,500 for the maintenance of the School of Mines. At this time the board

of trustees consisted of Hon. William A. H. Loveland, president of the board; Hon. Alpheus Wright, Hon. N. P. Hill, Hon. Adair Wilson, Hon. J. H. Yonley, W. W. Ware, esq., and Capt. James T. Smith, with Capt. E. L. Berthond, E. M., C. E., as secretary of the board. The board met at Golden on February 15, 1876, with four members present, besides the secretary. It was decided to reopen the school immediately. Prof. Gregory Board, E. M., then superintendent of a smelter at Golden, was appointed "professor in charge" at a salary of \$100 a month. He was "empowered to prescribe the qualifications necessary for entering the school for instruction and to prescribe such classes, recitations, lectures, exercises, and studies as may be required, and in general to oversee the whole system of instruction taught in the School of Mines, to grant diplomas, etc."

On March 4, 1876, the spring term of four months began, with 6 students on the roll and an attendance of 20 on lectures given twice a week on chemistry and metallurgy. On October 20, 1876, President Loveland, of the board of trustees, reported as follows:

The school is at present in a flourishing condition, but the smallness of the fund that has been heretofore appropriated prevents the adequate remuneration of additional teachers that are imperatively required, and to-day the board of trustees have hardly enough to pay the professor in charge, as all other teachers to this date in engineering, geology, drawing, and telegraphing have given their services gratuitously. I request the honorable legislative assembly of Colorado to consider the imperative necessity of assistance sufficient to pay for eight months in the year a moderate salary to an assistant instructor, and for the winter term to pay a skilled lecturer in chemistry, geology, and physics. The school, as decided by the last act of the Territorial legislature, is a free school of science for the youth of the new State of Colorado.

At this time the members of the faculty were as follows: Prof. Gregory Board, M. E., mineralogy, metallurgy, assaying; Richard Pearce, F. G. S., practical metallurgy; Theodore F. Van Wagenen, M. E., mining engineering; William Weil, applied chemistry; J. H. Yonley, chemistry; Rev. Thomas L. Bellam, A. M., mathematics. All of these gentlemen, with one exception, were in some way connected with the smelting interests of Golden.

The second term began on the 4th of September and closed on December 23. Courses were offered in chemistry, blowpipe analysis, assaying, mineralogy, metallurgy, mining engineering, geology, civil engineering, and drawing.

In that year the School of Mines sent a geological and mineralogical collection to the Centennial Exposition at Philadelphia. The collection received a premium but was lost.

It does not appear that the school received any appropriation from the first State legislature. However, on August 31, 1878, it was reported to be prosperous, and in charge of Professors Moss and Lakes. The number of students must have been very small and the work fragmentary and disconnected in its nature.

The building near Jarvis Hall was inconveniently situated, both for professors and students, and therefore after January 1, 1878, the work was carried on in a small laboratory in the town of Golden. In April of that year Jarvis Hall was burned. It was therefore still less desirable to return to the old building, and the school continued its work in Golden during the year 1878-79, with an attendance of 22 students, most of whom were taking only partial or special courses. In the year 1879-80 the school returned to the old building pending the completion of the new building. In the year 1879 the State legislature passed an act providing for the permanent support of the School of Mines by a tax levy of one-fifth of a mill upon the assessed valuation of property in the State of Colorado. This gave the school assurance of continued existence and enabled it to enlarge its sphere of work.

It was thereupon decided to erect a building in the town of Golden. A piece of land 150 feet square and well situated was donated by citizens of Golden, and a building of two stories, with accommodations for about 50 students and a laboratory sufficient for 30 students at a time, was completed in 1880 at a total cost of something over \$13,000. This amount was paid out of the proceeds of the annual mill tax without special appropriation.

Now that the school was assured of a permanent income it was possible to appoint a regular president and a staff of salaried instructors. In the year 1880 the board of trustees appointed as president Albert C. Hale, A. M., Ph. D. He began his duties on September 15 of that year with a faculty of seven members, including Professors Moss, Lakes, Board, Berthond, Bellam, and Rice.

Regular courses had already been established under the administration of Prof. Milton Moss, who was "professor in charge" from 1878 to 1880. They were now extended and rendered more thorough, and the school began in earnest the regular work of a school of mines.

The school opened on October 13, 1880, in the new building, with about 30 students in attendance. Before the end of the year the total attendance numbered 61. Most of these were still only special students, taking more or less incomplete courses. At this time, also, considerable additions were made of books and apparatus.

In the following year F. Steinhauer, president of the board of trustees, reported as follows:

It is therefore, first of all, the aim of the board of trustees, acting in pursuance of the policy of the State, to develop the School of Mines into an integral part of our school system, and, secondarily, and in so far as this may be feasible without detriment to the chief object, to give all possible assistance to persons who may seek simply to acquire the art of assaying or other practical training without following any full course of technical study or aspiring to a degree. It is finally hoped that the school will before long be able to enter the field of original research for the pro-



motion of the mining and industrial interests of the State. Such an institution will doubtless, through many unseen as well as visible channels, repay the State a hundredfold its cost and be found worthy both of public support and private munificence.

In the year 1882 a wing was added to the building at a cost of over \$10,000. To defray the cost of this addition it was necessary to incur a debt of \$10,000, which was afterwards made up from the yearly revenue.

For the two years ending August, 1882, the total expenditure amounted to \$55,914.10.

During the year 1882-83 the attendance was less than in the previous year. At the close of the year two students were graduated—William B. Middleton and Walter H. Wiley—both of whom are now mining engineers in Denver.

At this time President Hale resigned to accept a position in the Brooklyn Polytechnic Institute. He was succeeded in the fall of 1883 by Regis Chauvenet, A. M., B. S.

By this time the school had become pretty well known, and among its students were to be found graduates of several of the leading Eastern colleges. A good beginning had been made, but much remained to be done. Of 49 students during the fall term of 1883 only some 20 were bona fide students of mining. The remainder were special students taking courses in drawing and other subjects.

From 1883 to 1888 the school continued to do good work without any large increase in faculty or students. The number of students remained at about 50, but with a steadily increasing proportion of students taking the regular course. The course of study was improved and more closely adapted to the needs of students wishing to become mining engineers.

About the year 1885 the members of the faculty began a series of special reports on the mining resources of Colorado. The work was largely done during the summer vacations, and for several years a number of valuable reports were published which contributed not a little to the development of the mineral wealth of the State. The faculty of the School of Mines thus did a work at small cost which has been done in other States by means of expensive geological surveys.

In the year 1887 Senator Teller first proposed in the United States Senate that a grant be made on certain conditions to the School of Mines of one-half of the total receipts from the sale of mineral lands in Colorado. This bill, known as the Teller bill, has frequently passed the Senate, according to the amenities of "Senatorial courtesy," but has never failed to perish in the House.

By the year 1886 the debt contracted in 1882 had been entirely paid out of the annual revenues, which at that time amounted to about \$17,000. The property of the school was then valued at \$50,000.

In the year 1888-89 a residence for the president was erected at a cost of \$5,430.

In the year 1890 a large new building, now known as the "Executive building," was completed at a cost of about \$38,000. It is at present the largest building possessed by the School of Mines. Its erection involved a debt of over \$11,000, which was paid, as in the case of the previous debt, out of the revenues of the next few years. In the same year the School of Mines bought of J. Alden Smith his valuable collection of minerals for the sum of \$1,500.

In this year the department of electrical physics was introduced, and it was decided that thereafter all the courses should be four years in length and that the students should be encouraged to take the regular course instead of special courses. In the year 1892 it was finally decided to admit no more students to special courses, but that all students should be required to take one of the regular four-year courses. The last irregular student left the school in the spring of 1893.

By the year 1892 the faculty had increased to 9 and the number of students to 109.

By act of the eighth general assembly in 1891 the direct tax of one-fifth of a mill was changed to one-sixth of a mill for the benefit of the newly established State Normal School. This action, together with a reduction in the assessment, resulted in a loss of revenue of about \$5,000 a year, until on March 11, 1895, this change was pronounced unconstitutional and the one-fifth mill tax of 1879 was restored.

In 1892 was purchased the Randall cabinet, which added greatly to the value of the collection of minerals. This collection was sent to the World's Fair, at Chicago, to represent the mineral wealth of Colorado.

In 1893 the general assembly made a special appropriation of \$20,000 for a new building, which was greatly needed. This building, known as the hall of engineering, was completed in 1894 at a cost of about \$25,000. At this time the president was able to report that the debt had all been paid and that the School of Mines was in fine condition.

In 1895 the general assembly appropriated \$5,000 for improving the grounds.

In the year 1897 the third or attic floor of the executive building was fitted up as a drawing room at a cost of \$5,000, according to plans drawn by members of the faculty.

Since the year 1894 the annual expenditure has exceeded the revenue, and from time to time it has been found necessary to borrow from the banks. At the present time there is a debt of about \$24,000 due to a banking house in Golden.

The general assembly in 1899 made a special appropriation of \$20,000 for payment of the debt and \$40,000 for the purchase of a site and the erection of a new building, but the revenue of the State

has proved insufficient for the payment of this and other like appropriations, and it is not expected that the School of Mines will receive anything from this source.

Under the administration of President Chauvenet the School of Mines made steady and even rapid progress, and it now ranks with the best institutions of the kind in the United States. In so far as practical work is concerned, it is probably the equal, if not the superior, of any European school.

#### FACULTY.

The faculty numbers 17 members, among whom are graduates of Harvard, Giessen, University of Michigan, Heidelberg, Case School of Applied Science, Cornell, University of North Carolina, Johns Hopkins University, Purdue University, and the Colorado School of Mines.

#### STUDENTS.

It has never been the aim of the School of Mines to increase in members at the expense of efficiency. The number of students has always been small. In the early years there were many special students; now all students are regular, except a few post-graduates.

Year.	Students.	Year.	Students.
1876 (spring term).....	26	1887-88.....	50
1876-77.....		1888-89 (fall term).....	38
1877-78.....		1889-1890 (fall term).....	50
1878-79.....	22	1890-91 (all regular).....	65
1879-80.....	30	1891-92.....	106
1880-81.....	61	1892-93.....	111
1881-82.....	94	1893-94.....	130
1882-83.....	76	1894-95.....	135
1883-84 (fall term).....	49	1895-96.....	161
1884-85.....	50	1896-97.....	180
1885-86.....	51	1897-98.....	183
1886-87.....	49	1898-99.....	220

#### Graduates.

Year.	Number of graduates.	Year.	Number of graduates.
1883.....	2	1893.....	6
1886.....	2	1894.....	6
1888.....	4	1895.....	23
1889.....	3	1896.....	14
1890.....	1	1897.....	23
1891.....	2	1898.....	24
1892.....	9	1899.....	20

Nearly all of these graduates are employed in responsible positions as chemists or mining engineers. The authorities of the School of Mines take special pains to secure positions for their graduates and are successful in so doing. Students are frequently induced to leave the school before graduating by offers of good positions.

## REQUIREMENTS FOR ADMISSION.

Candidates must be at least 17 years of age. They must sustain examinations in English, geography, arithmetic, algebra, geometry, and zoology.

Graduation diplomas from accredited high schools are accepted in lieu of examination to entering class.

## COURSES AND DEGREES.

There are two full courses of study, viz: Mining and metallurgical engineering, and electrical engineering. Each covers a period of four years.

The degrees given are: Engineer of Mines and Metallurgy (E. M.), and Electrical Engineer (E. E.)

No special or partial students are admitted, except as post-graduates.

The course in mining and metallurgy is outlined as follows:

Freshman year: Algebra, trigonometry, general chemistry, analytical and descriptive geometry, drawing, qualitative analysis.

Sophomore year: Calculus, analytical geometry, mineralogy, physics, physical laboratory, mechanism, quantitative analysis, mechanical drawing, chemical analysis, (lectures), volumetric analysis, and fire assaying.

Junior year: Calculus, geology, mechanics, surveying, metallurgy, machine design, graphics.

Senior year: Metallurgy, mining, hydraulics, theory of construction, mining and metallurgical design, hydraulic laboratory, theoretical chemistry, testing laboratory, power transmission, technical chemistry, steam-engine laboratory.

Over one-half of the students fail to pass the examinations of the freshman year. After the first year most of the students are able to complete the course, although the examinations are still very rigid.

## MINING AND METALLURGICAL EXCURSIONS.

Visits to local mines and metallurgical plants are of weekly occurrence during the last two years of the course. In addition to these the senior class makes two excursions to more distant plants. The graduating class of 1898 devoted two weeks to the spring trip, visiting Manitou for the study of the local geology; Cripple Creek, for the inspection of the mines, cyanide mills, and power plants of the famous gold camp; the large chlorination plant at Colorado City; the coal mines and the plants of the American Zinc-Lead Company and the Colorado Electric Power Company at Canon City, and the steel works and lead smelters at Pueblo.

Many students work during the summer months in mines or mills. Though this is no part of the course, students in the upper classes are urged to avail themselves of these opportunities.

## LIBRARY.

The library contains nearly 5,000 volumes, exclusive of pamphlets, mostly standard, scientific, and technical works, though history and travels are not neglected. Its cost per volume, as must be the case with scientific works, has been large. Complete sets of the transactions of the institute of mining engineers, civil engineers, association of engineering societies, journals of chemistry, electricity, and metallurgy, and technical cyclopedias in various lines are among the recent additions.

## MUSEUM.

The college has a large collection of specimens, mostly arranged for purposes of instruction, and distributed among the various class rooms. The museum proper

contains many specimens of gold and silver ore, zeolites, calcites, and other specimens interesting to visitors.

Within the past three years over 10,000 specimens have been added to the collection.

#### APPARATUS AND MACHINERY.

The estimate for the year 1899 on the value of apparatus and machinery was \$45,000.

#### FINANCES.

The School of Mines has never received any grant of lands from either Federal or State governments.

There is no permanent endowment. There have been gifts of machinery and apparatus from time to time.

Tuition is free to bona fide residents of Colorado. Students from other States pay \$50 a term. All are charged with material consumed or broken.

The State has seldom made special appropriations for the support of the school. Besides the small amount appropriated in 1870, the special appropriations have been as follows:

1874.....	\$10,000
1876.....	3,500
1893.....	20,000
1895.....	5,000
Total.....	38,500

The main source of revenue since the year 1879 has been the tax of one-fifth of a mill upon the assessed valuation of the State, which now amounts to about \$40,000 a year.

The table below shows the expenses of the school from the year 1879 to the year 1898. From these figures must be deducted over \$42,000, being the amount of the debts incurred from time to time.

1879-80.....	\$20,049.46	1892-1894.....	\$91,058.23
1880-1882.....	<sup>a</sup> 35,864.64	1894-1896.....	97,904.91
1882-1884.....	54,330.55	1896-1898.....	<sup>c</sup> 89,541.91
1884-1886.....	33,337.81	Total.....	637,873.12
1886-1888.....	44,744.04	Less debts.....	40,000.00
1888-1890.....	<sup>b</sup> 94,169.12	Net expenditures....	<sup>d</sup> 600,000.00
1890-1892.....	76,872.45		

The value of the property of the School of Mines is at present something over \$200,000. The school possesses very little land, and town sites in the neighborhood are therefore held at exorbitant figures.

#### SOURCES OF INFORMATION.

The catalogues and reports of the School of Mines.

A conversation with President Chauvenet.

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<sup>a</sup> Debt, \$10,000. <sup>b</sup> Debt, \$11,481.22. <sup>c</sup> Debt, \$21,387.61. <sup>d</sup> In round numbers.



## Chapter V.

### THE STATE AGRICULTURAL COLLEGE.

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The first move toward establishing an agricultural college in Colorado was made by Congress in what is known as the Morrill Act of July 2, 1862, which gave public lands to the several States and Territories in order to "provide colleges for the benefit of agriculture and the mechanic arts." According to this act, each State was to receive 30,000 acres for each Senator and Representative it had in Congress.

Section 4 of the Morrill Act reads as follows:

The leading object shall be, without excluding other scientific and classical studies, and including military tactics, to teach such branches of learning as are related to agriculture and the mechanic arts, in such manner as the legislators of the States may respectively prescribe, in order to promote the liberal and practical education of the industrial classes in the several pursuits and professions of life.

This act can not be said to have established the Agricultural College, for the lands were not finally made available until the year 1884, yet the provisions of the act were known and must have encouraged the legislators of Colorado in establishing the college. Through this act the college received an endowment of 90,000 acres of land.

On February 11, 1870, an act of the Territorial legislature nominally established the Agricultural College, fixed its location at Fort Collins, and named a board of trustees, 12 in number, but appropriated no funds for the institution.

The people of Fort Collins, however, took a lively interest in the proposed college and, before 1872, 240 acres of land near Fort Collins were given for college purposes by Arthur H. Patterson (80 acres), Robert Dalzell (30 acres), Joseph Mason, H. C. Peterson, and J. C. Mathews (jointly 50 acres), and the Larimer County Improvement Company (80 acres).

On February 13, 1874, the Territorial legislature made an appropriation of \$1,000 to aid the trustees in erecting buildings, provided they should raise "by subscription, donation, or otherwise," an equal sum for buildings and grounds. More than the required sum was subscribed by the Improvement Company, by Collins Grange, and by private parties, amounting in all to \$1,123. In order to secure certain rights that were in danger from the inaction of the authorities, the



AGRICULTURAL HALL, STATE AGRICULTURAL COLLEGE.



members of Collins Grange held a picnic on the college grounds. During the day 20 acres of college ground were sown to wheat and cottonwood cuttings planted along the north line of the grounds. This wheat land, in harvest time, produced a yield of 375 bushels.

The total sum available from the legislative appropriation, from subscribers, and from interest was \$2,160. Of this the sum of \$1,705.76 was spent before October 1, 1876, leaving a balance in the treasury of \$454.24. A "substantial brick building" of diminutive size had been erected on the grounds and some other improvements had been made. At this time the property of the college, in land and building, was estimated at \$5,000.

In this year the college became an institution of the new State of Colorado, and early in 1877 it came under the control of the State board of agriculture. The act establishing this board provides as follows:

That a board is hereby constituted and established which shall be known by the name and style of the State board of agriculture. It shall consist of eight members, besides the governor of the State and the president of the State Agricultural College, who shall be ex officio members of the board. The governor, by and with the consent of the senate, on or before the third Wednesday of January of each biennial session of the general assembly, shall appoint two members of the board to fill the vacancies that shall next occur, which vacancies shall be so filled that at least one-half of the appointed members of the board shall be practical farmers.

The State board of agriculture shall have the general control and supervision of the State Agricultural College, the farm pertaining thereto, and lands which may be vested in the college by State or national legislation and of all appropriations made by the State for the support of the same. The board shall have plenary powers to adopt all such ordinances, by-laws, and regulations, not in conflict with the law, as they may deem necessary to secure the successful operation of the college and promote the designed objects. The design of the institution is to afford thorough instruction in agriculture and the natural sciences connected therewith. To effect that object most completely, the institution shall combine physical with intellectual education, and shall be a high seminary of learning, in which the graduates of the common school of both sexes can commence, pursue, and finish a course of study, terminating in thorough theoretical and practical instruction in those sciences and arts which bear directly upon agriculture and kindred industrial pursuits.

On March 9, 1877, the first general assembly also provided for the support of the college by a levy of one-tenth of a mill upon the assessed valuation of property in the State, thus giving to the college an income of about \$7,000 a year.

The first meeting of the board of agriculture was held in the office of Governor John L. Routt, in Denver, on March 19, 1877. The members of the board were as follows: William Bean, M. N. Everett, Harris Stratton, John J. Ryan, B. S. La Grange, W. F. Watrous, P. M. Hinman, John Armor. W. F. Watrous was made president and Harris Stratton secretary of the board. The term of office of the members was determined by lot.

It was decided to spend about \$7,000 in the construction of a build-

ing, which was begun in the summer of 1878 and finished early in 1879.

On February 3, 1879, the general assembly made better provision for the support of the college by a levy of one-fifth of a mill in place of the levy of one-tenth of a mill made in 1877.

The college was opened for students on September 1, 1879, with Rev. E. E. Edwards, D. D., of McKendree College, Lebanon, Ill., as president, assisted by A. E. Blount, A. M., as professor of agriculture, and Frank J. Annis, A. B., as professor of chemistry.

During the first term there were 20 students in attendance. There was but one course of study. The college year closed with the autumn term and the second year began with the spring term after a winter vacation. This plan was abandoned after a couple of years, and the long vacation thereafter extended from June to September. In addition to the work of instruction in agriculture, Professor Blount established a model farm and carried on experiments of considerable value. At the close of 1880, the value of the farm and buildings was estimated at over \$20,000. In 1881 a dormitory was erected at a cost of \$6,000.

During the year 1880, 45 students were reported in attendance, and in the following year the number had increased to 62. It was found that many of those who applied for admission were poorly prepared, and an introductory or preparatory year was introduced with a course of study equivalent to that of the eighth grade in the public schools. For those who had completed the work of this year a four years' course was offered. This course, as revised in 1882, was as follows:

Freshman year: Algebra, geometry, rhetoric, bookkeeping, ancient history, drawing, botany, agriculture, labor (two hours a day).

Sophomore year: Geometry, trigonometry, surveying, physics, history, English literature, drawing, chemistry, blowpipe analysis, zoology, mechanics, shopwork (two hours daily).

Junior year: Physics, meteorology, geology, anatomy, physiology, entomology, chemical analysis, floriculture, horticulture, agricultural chemistry, labor.

Senior year: Botany, astronomy, moral science, stock breeding, food stuffs, household economy, landscape gardening, veterinary science, United States Constitution, psychology, logic, political economy, mechanics (two hours shop work).

On April 2, 1882, President Edwards resigned and was succeeded on August 1 by Clarence L. Ingersoll, M. S. At that time the faculty numbered 7 in all.

In 1883 the legislature made a special appropriation for a mechanical shop and a conservatory. In the same year the department of veterinary science and zoology was created.

On June 7, 1884, three students were graduated from the college. In April of this year the department of music was added, making seven departments in all. Those of agriculture, horticulture and botany, chemistry and physics, mathematics and engineering, mechan-





HORTICULTURAL HALL, STATE AGRICULTURAL COLLEGE.



ics and drawing, veterinary science and zoology, and the department of music.

In the biennial report for 1884, the work of the college is thus outlined in its "threefold character:"

First. Giving instruction such as shall educate the mind, eye, and hand, and send into the various industries of the State men and women trained to make the best self-supporting citizens, those who will add to the material wealth of the State.

Second. To experiment in directions where private individuals can not or will not, and to put the results before the people for their benefit.

Third. To exhibit the work of our hands in various lines, and call attention to the resources which lie hidden, as it were in our soil, water, and climate, and to protect the great stock interests of the State by the use which we can make of our veterinary department.

In June, 1886, the course of studies adopted in 1882 was reduced to three recitations daily, and more attention was given to irrigation engineering, a most important subject in an arid country like Colorado, where the farmer is almost entirely dependent on irrigation for the success of his crops.

In 1887 the "Hatch experiment station bill" passed Congress and in February, 1888, an appropriation was made of \$15,000 a year for the support of an experiment station in Colorado in connection with the State Agricultural College. The agricultural experiment station was forthwith organized, with auxiliary stations near Del Norte, Rockyford, and Eastonville, and since that time it has regularly received the appropriation of \$15,000 a year. This fund can not be used for any purpose other than experimental investigation, but since the president and other members of the college faculty are also officers of the experiment station and receive salaries in connection therewith, the fund is of great benefit to the college.

In the year 1889 the State legislature made a special appropriation of \$18,000 for erecting an extension to the main building.

On August 30, 1890, was passed what is known as the "second Morrill Act," by which Congress gave the Agricultural College the sum of \$15,000 for the first year and an additional \$1,000 each year until the total sum of \$25,000 should be reached. No part of this appropriation can be used for building or repairing, but the whole must be "applied only to instruction in agriculture, the mechanic arts, the English language, and the various branches of mathematics, natural and economic science, with special reference to their applications to the industries of life and to the facilities for such instruction."

The income thus received has been of great benefit to the college. For the year 1899 it was \$25,000, and will remain at that point during future years.

On March 17, 1891, the State legislature passed an act to replace the one-fifth mill tax by a tax of one-sixth of a mill, whereby the income of the college was considerably reduced for several years, until

in 1895 the act was declared unconstitutional by the supreme court of the State and the one-fifth mill tax restored.

In the year 1891 President Ingersoll resigned. Prof. J. W. Lawrence acted as president until the appointment of Alston Ellis, A. M., Ph. D., LL. D., as president and professor of political economy and logic.

At that time the faculty numbered 15 in all. There were 4 courses, with 11 departments. There were 146 students, of whom 101 were men and 45 women. The library contained 4,270 bound volumes and 6,880 pamphlets.

Since that time the college has grown rapidly in numbers and usefulness, as can be seen from the appended statistics.

Early in 1899 President Ellis resigned his position and on August 1 he was succeeded by Rev. Barton O. Aylesworth, A. M., LL. D., formerly president of Drake University, Des Moines, Iowa.

*Students and graduates.*

Year.	Males.	Females.	Total.	Graduates.
1879			20	
1880	14	11	25	
1881	36	22	57	
1882	49	32	81	
1883	50	31	81	
1884	40	37	77	3
1885	50	46	96	6
1886	45	42	87	1
1887	68	42	106	4
1888	71	38	109	4
1889	73	34	107	2
1890	56	18	74	9
1891	77	29	106	3
1892	101	45	146	9
1893	135	44	179	7
1894	142	56	198	7
1895	164	66	230	13
1896	161	71	232	12
1897	223	112	335	11
1898	245	99	344	13
1899	261	94	345	18

REQUIREMENTS FOR GRADUATION.<sup>a</sup>

The preparatory year and the subfreshman year are equivalent to the eighth and ninth grades of the public schools.

The college courses may, therefore, be regarded as equal to the last three years of a high-school course and the first year of a college course, if we regard the agricultural subject and the daily labor as equivalent to the ancient and modern languages of high-school and college work.

The work of freshman and sophomore years is the same in all the courses. After the sophomore year the student may elect one of five courses: Agricultural, mechanical engineering, civil and irrigation

<sup>a</sup>Several changes have since been made.





MECHANICAL ENGINEERING BUILDING, STATE AGRICULTURAL COLLEGE.







CHEMICAL LABORATORY, STATE AGRICULTURAL COLLEGE





CHEMICAL LABORATORY, STATE AGRICULTURAL COLLEGE.





engineering, ladies' course, or the commercial department. The work as prescribed for students taking the agricultural course is as follows:

Freshman year: Geometry, agriculture or carpentry and joinery, botany, general history, rhetoric and rhetorical analysis, solid geometry, mechanical drawing, domestic science, work in shop and on farm, military drill, and physical culture.

Sophomore year: Algebra, literature, physiology, trigonometry, physics, descriptive geometry, psychology, domestic science, household hygiene, stock breeding, surveying, shop, dairying, military drill and physical culture, and rhetorical work.

Junior year: Physics, meteorology, physiological botany, geology, zoology, recent history, stock feeding, landscape gardening, entomology, irrigation, hydraulics, farm work, military drill, and rhetorical work.

Senior year: Chemistry, literature, Constitution of the United States, logic, political economy, recent history, sociology, dairying, horticulture, agricultural chemistry, work in garden, military drill, and rhetorical work.

All the courses lead to the degree of Bachelor of Science except that of the commercial department.

The degree of Master of Science will be conferred upon all graduates of the college who pursue thoroughly some line of work after graduation, and who submit an acceptable thesis.

#### THE LIBRARY.

The college library was founded in 1878 by donations from members of the faculty and interested citizens of Fort Collins, aided by a small purchasing fund derived from the one-fifth mill tax. Now it contains 14,000 bound volumes, besides many thousand pamphlets. Over 100 periodicals are taken by subscription and many by exchange.

#### BUILDINGS.

The chief buildings are the main college building, chemical laboratory, horticultural hall, agricultural hall, mechanical engineering building, mechanical engineering laboratory, civil and irrigation engineering building, domestic science building, greenhouses and forcing house.

#### FARM AND STOCK.

The farm contains 240 acres, nearly all under cultivation. The live stock consists of Clydesdale grade draft horses, shorthorn and Jersey cattle, Shropshire sheep, and Berkshire hogs.

#### SCIENTIFIC AND TECHNICAL APPARATUS.

All departments of science have elaborate, modern, and costly equipment. Fine cabinets of specimens are to be found in the museum. Laboratory work in agriculture and dairying, horticulture and botany, chemistry, physics, geology and mineralogy, comparative anatomy, and entomology is done with the aid of apparatus representing a cost of \$25,000.

#### FINANCES.

All college fees were abolished in January, 1891. Tuition in all the regular and special classes of the college is free. There is no charge of any kind for material used in the laboratory work or for books taken from the college library.

The land-income fund is derived from interest on money received from sales of the land donated by the General Government under the Morrill Act of 1862, and from rents of leased lands not yet sold. It amounts to about \$8,000 a year.

Under the Hatch Act the college receives \$15,000 a year for the support of the United States experiment station. No part of this fund is available for college support, yet the burden on college funds is considerably relieved thereby. The United States fund under the Morrill Act now yields \$25,000 a year.

The State tax fund of one-fifth of a mill on all taxable property of the State yields about \$40,000 a year.

A special fund, derived from the sale of stock, farm products, and the like, yields about \$1,000 a year.

The yearly receipts from all sources are, therefore, about \$89,000, and it is safe to say that the Agricultural College is financially the most prosperous of all the educational institutions of the State.

Special appropriations have been granted by the State legislature from time to time as follows:

Year.	Amount.	Purpose.
1881 .....	\$5,000	College dormitory.
1883 .....	10,000	Mechanical engineering building.
1889 .....	18,000	Extension of main building.
1893 .....	6,500	Sewer system.
1895 .....	10,000	Additions to buildings.
1899 .....	15,000	Do.
Total .....	\$64,000	

The appropriation of 1899 has not been paid, and it is not likely that it will ever be paid, owing to the fact that the State revenue is not likely to be sufficient for this and other special appropriations.

#### VALUE OF PROPERTY.

The total valuation for each of eight years is given below:

1891 .....	\$144,568.98	1895 .....	\$207,411.83
1892 .....	176,600.26	1896 .....	212,699.52
1893 .....	187,847.53	1897 .....	232,667.62
1894 .....	197,633.76	1898 .....	253,238.73

In addition, the experiment station property was in December, 1898, valued at \$25,627.58.

#### THE AGRICULTURAL EXPERIMENT STATION OF COLORADO.

The experiment station, founded under the Hatch Act of 1887, has continued to do good work since that time. Since the conditions under which agriculture must be carried on in Colorado are very different



CIVIL AND IRRIGATION ENGINEERING BUILDING, STATE AGRICULTURAL COLLEGE.



from those in nonarid States, the need for experiments and systematized knowledge in agriculture is very great.

Section 4 of the Congressional act relating to experiment stations provides "that bulletins or reports of progress shall be published at the said stations at least once in three months." The first bulletin of the station was issued in August, 1887, under the title *Reports of Experiments in Irrigation and Meteorology*, by Prof. Elwood Mead. Since that time over forty of these bulletins have been issued. Among the subjects investigated may be mentioned grains, grasses, alfalfa, sugar beets, potatoes, apples, strawberries, tobacco, the Russian thistle, milk, insects, soils and alkali, weeds, seepage, artesian wells, cattle feeding.

The main station is located at the Agricultural College and the sub-stations at Rockyford and Cheyenne Wells. The president of the college is director of the experiment station, and nearly all the officers of the station are also members of the college faculty.

#### SOURCES OF INFORMATION.

The official reports to the governor and to the State superintendent of public instruction, especially the Eighteenth Annual Report, containing a historical sketch by President Ellis.



## Chapter VI.

### THE STATE NORMAL SCHOOL.

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Section 12 of the act which established the State University in the year 1877 provides as follows:

The university shall include a classical, philosophical, normal, scientific, law, and other departments.

It was, therefore, originally intended that the university should do the work of a normal school. A normal course was established at the university and continued to exist until the year 1889, when the State Normal School was established. The normal work done at the university included but little direct pedagogical instruction, and it was thought by many that such instruction could better be given in an independent normal school.

The "Act to establish, govern, and maintain a State normal school" was passed by the State legislature in the session of 1889, approved on April 1 of that year, and went into effect on July 1. It provided as follows:

A State normal school is hereby established at or near the city of Greeley, in the county of Weld, and State of Colorado, the purpose of which shall be instruction in the science and art of teaching, with the assistance of a suitable practice department, and in such branches of knowledge as shall qualify teachers for their profession: *Provided*, That a donation shall be made of a site for said normal school, consisting of 40 acres of land, with a building erected thereon according to plans and specifications furnished by the State board of education, and to cost not less than \$25,000, \$10,000 of which shall be paid by the State, as hereinafter provided:

The act further provided for the government of the Normal School by a board of six trustees, to be appointed by the governor, two for two years, two for four years, and two for six years, and thereafter two to be appointed every two years for a term of service of six years. The State superintendent was also to be ex officio a member of the board.

An appropriation of \$20,000 was made, half of which was to be used for the building, and the other half for furniture and for the running expenses of the school during the year 1890.

The city of Greeley and holders of property in Greeley provided the 40 acres above mentioned and \$15,000 in cash, and the work of erecting a building was begun. According to the approved plans the

building was to be a large edifice of brick, trimmed with red sandstone, 240 feet in length. It was not possible, with the limited funds at the disposal of the board, to do more than erect the east wing, which was completed in the year 1891.

The Normal School opened its doors to students on October 6, 1890, with a faculty of five teachers in the Normal School proper and five in the model school, under the presidency of Thomas J. Gray. The other members of the normal faculty were Paul H. Hanus, A. M., professor of pedagogy; Margaret Morris, English and history; Mary D. Reid, mathematics and geography, and John R. Whiteman, vocal music.

On November 25, 1890, President Gray reported 76 students in the normal classes and 255 in the model school. In this report President Gray writes as follows:

With a view of giving this completeness to the school system of the State, the friends of the public schools ask for a State Normal School. The young men and women of the State have a right to expect at home as good opportunities for preparation for teaching as they can find in other States. The State must meet their demand or they will seek such advantages elsewhere, and the State will lose them from her schools. The act of the last general assembly creating the school brings the State into line with New York, Pennsylvania, etc. It now only remains for the general assembly to make such provision for the financial support of the Normal School of Colorado as will meet its necessities and enable it to fulfill the purpose of its creation.

On September 8, 1891, President Gray was succeeded by Z. X. Snyder, Ph. D., as president and professor of psychology and science of education. The faculty was increased in members and the courses of study were reorganized. The normal course included five years—preparatory, freshman, sophomore, junior, and senior—and the work as laid down in the catalogue was equivalent to that done in a good high school. The model school comprised the usual eight grades of a public school.

The general policy of the Normal School is expressed in the catalogue for 1891:

The function of the Normal School is to make teachers. To do this it must not only keep abreast the times, but it must lead the educational van. It must project the future. There must be within it a continual growth in scholarship, power, culture, and influence; such scholarship, such power, such culture, such influence as will grow strong men and women equipped for the work of teaching. To this end those who graduate must be scholars and teachers—teachers possessing a high type of character. To make the former there must be strong academic departments; the latter, strong professional training. In short, the function of the school is to promote and elevate the teacher, and by so doing promote and elevate the profession of teaching, which will result in the rise of the general intelligence and culture of the people of the State.

Under the administration of President Snyder the Normal School soon became thoroughly organized. The kindergarten department

was opened in 1892. The normal building was increased to its present size in 1893. The faculty was gradually increased in numbers and efficiency. The equipment in the various departments was rendered more and more complete. The number of students increased until the year 1896, when it reached its maximum. The number of graduates has steadily increased.

*Students and graduates.*

Year.	Normal school.	Model school.	Kinder-garten.	Total.	Grad-uates.
1890-91.....	96	255	.....	351	12
1891-92.....	272	41	.....	313	16
1892-93.....	314	75	56	445	23
1893-94.....	363	87	65	515	35
1894-95.....	363	193	62	618	32
1895-96.....	419	165	72	656	31
1896-97.....	357	148	50	555	44
1897-98.....	303	154	45	502	57
1898-99.....	323	134	39	496	70
Total .....	2,810	1,242	389	5,351	320

REQUIREMENTS FOR ADMISSION.

At a meeting of the board of trustees, held June 2, 1897, a resolution was passed making the course three years, namely: Sophomore, junior, and senior years. The resolution regulates the admission.

1. All who enter must give evidence of good moral character.
2. High school graduates, or those having at least an equivalent education, may enter the junior class without examination.
3. Persons who hold a teacher's certificate will be admitted to the sophomore class without examination. All also who have an equivalent education will be admitted.
4. Graduates of other normal schools of high standing will be admitted to the senior year.
5. College graduates will be admitted to the senior year.

REQUIREMENTS FOR GRADUATION.

Any person who completes the required course of study, and who possesses skill in the art of teaching, and who is of good moral character, will receive a diploma, which, according to law, is a life certificate to teach in the State of Colorado; and, in addition, he will have conferred upon him by the trustees and faculty of the institution the degree of Bachelor of Pedagogy.

The courses of study are as follows:

Sophomore year: Algebra; geometry; biology; literature and English; reading and physical culture; Latin, German, French, Spanish, or English.

Junior year: Psychology; history and English; Latin, German, French, Spanish, or English; reading and physical culture; drawing; Sloyd, domestic economy, sewing, or library work; arithmetic; observation and pedagogy.

Senior year: Philosophy and history of education; physiography; physics and chemistry; model practice and pedagogy; literature and English; American history; music; art.

In the kindergarten department a two years' course of study is offered, including psychology, history of pedagogy, philosophy of



STATE NORMAL SCHOOL OF COLORADO.

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